

Figure 1

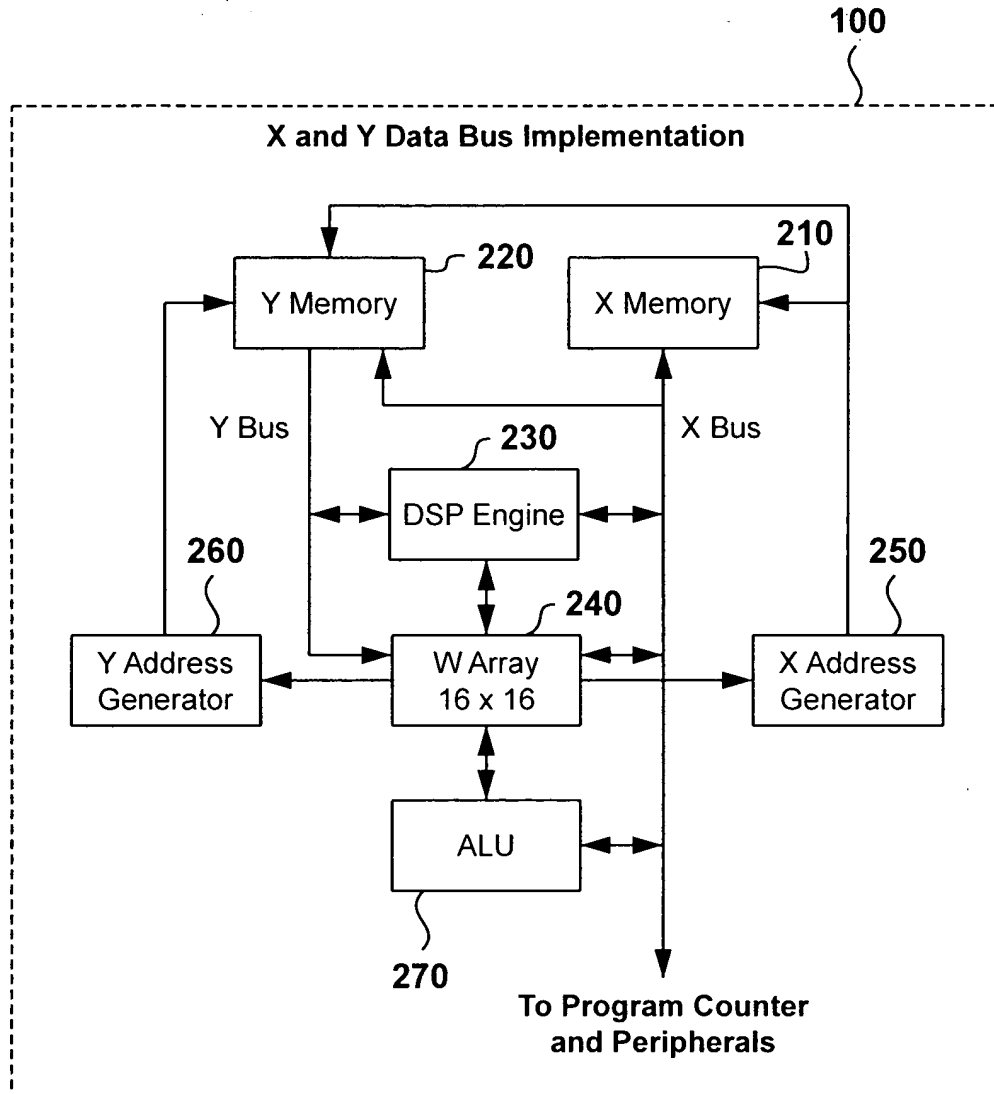


Figure 2

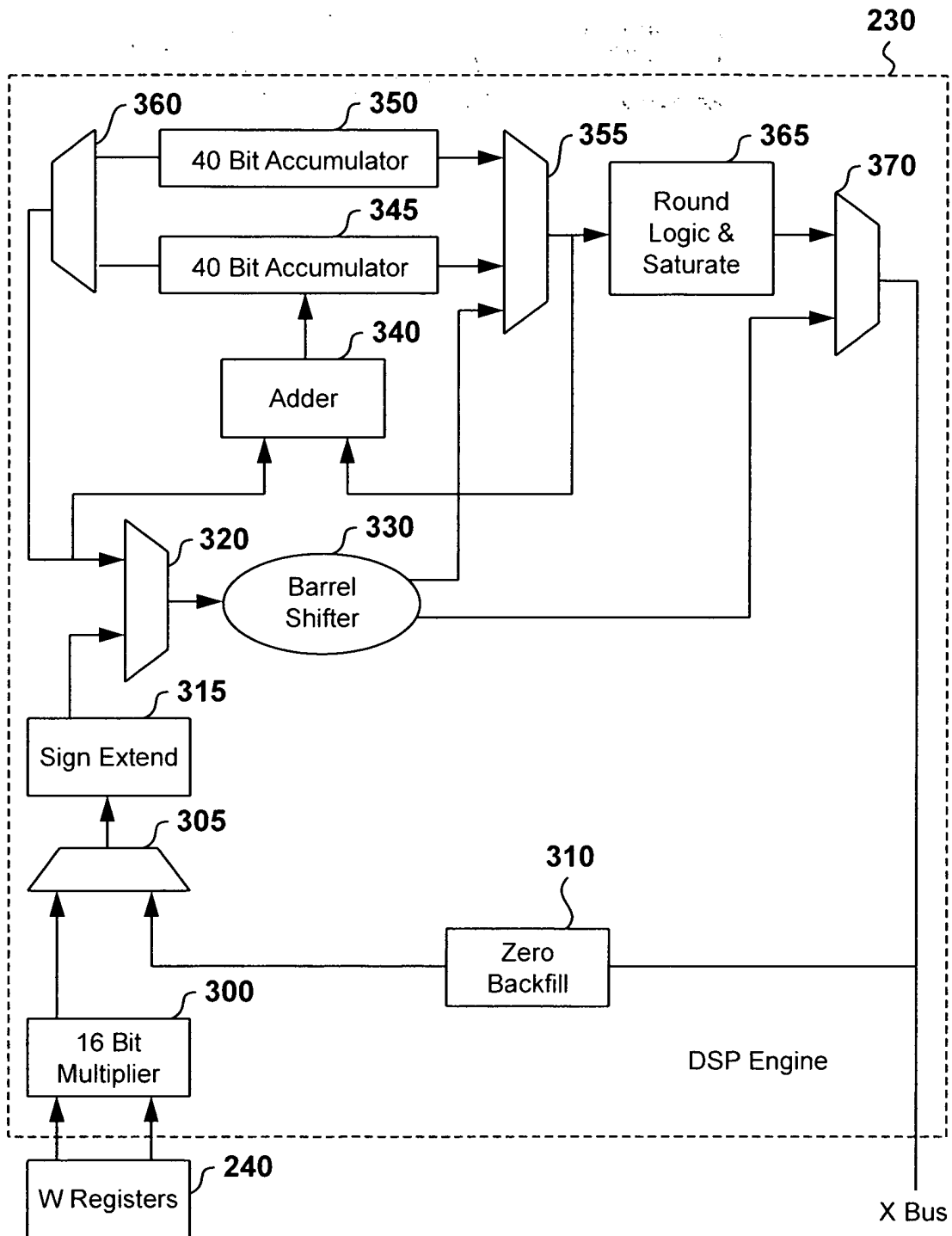


Figure 3

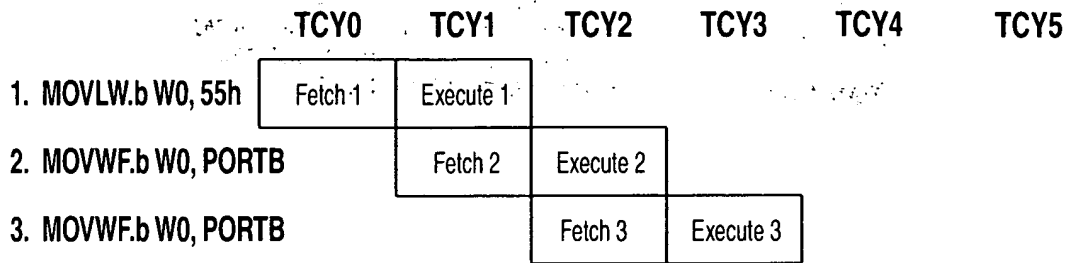


Figure 4A

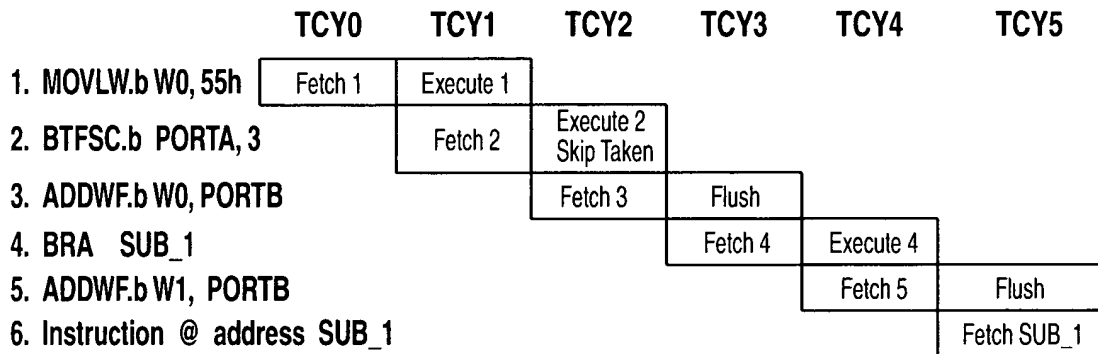


Figure 4B

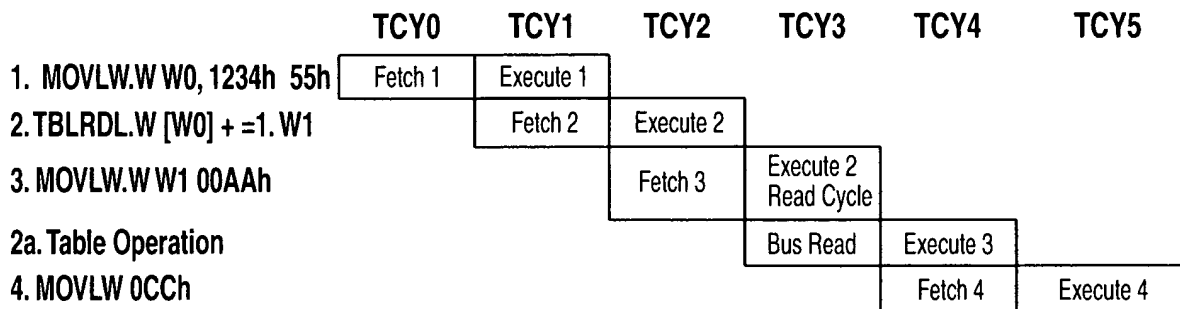


Figure 4C

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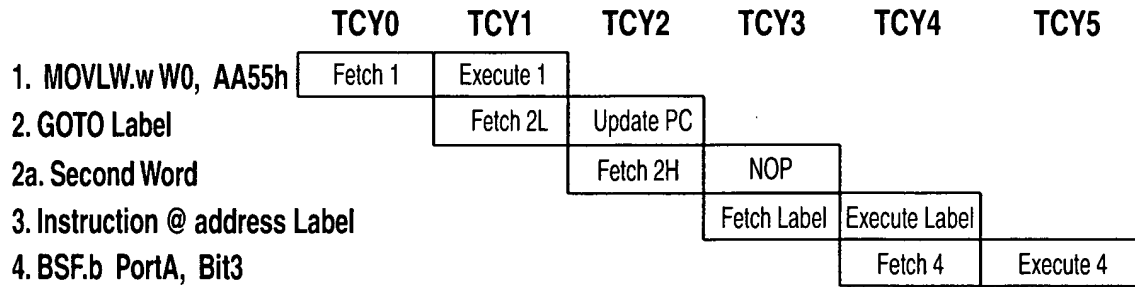


Figure 4D

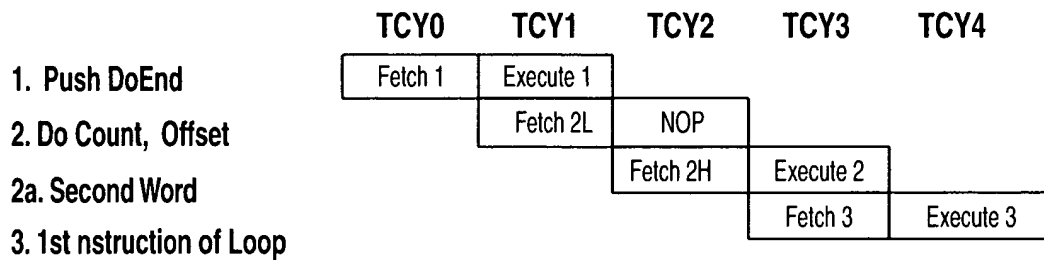


Figure 4E

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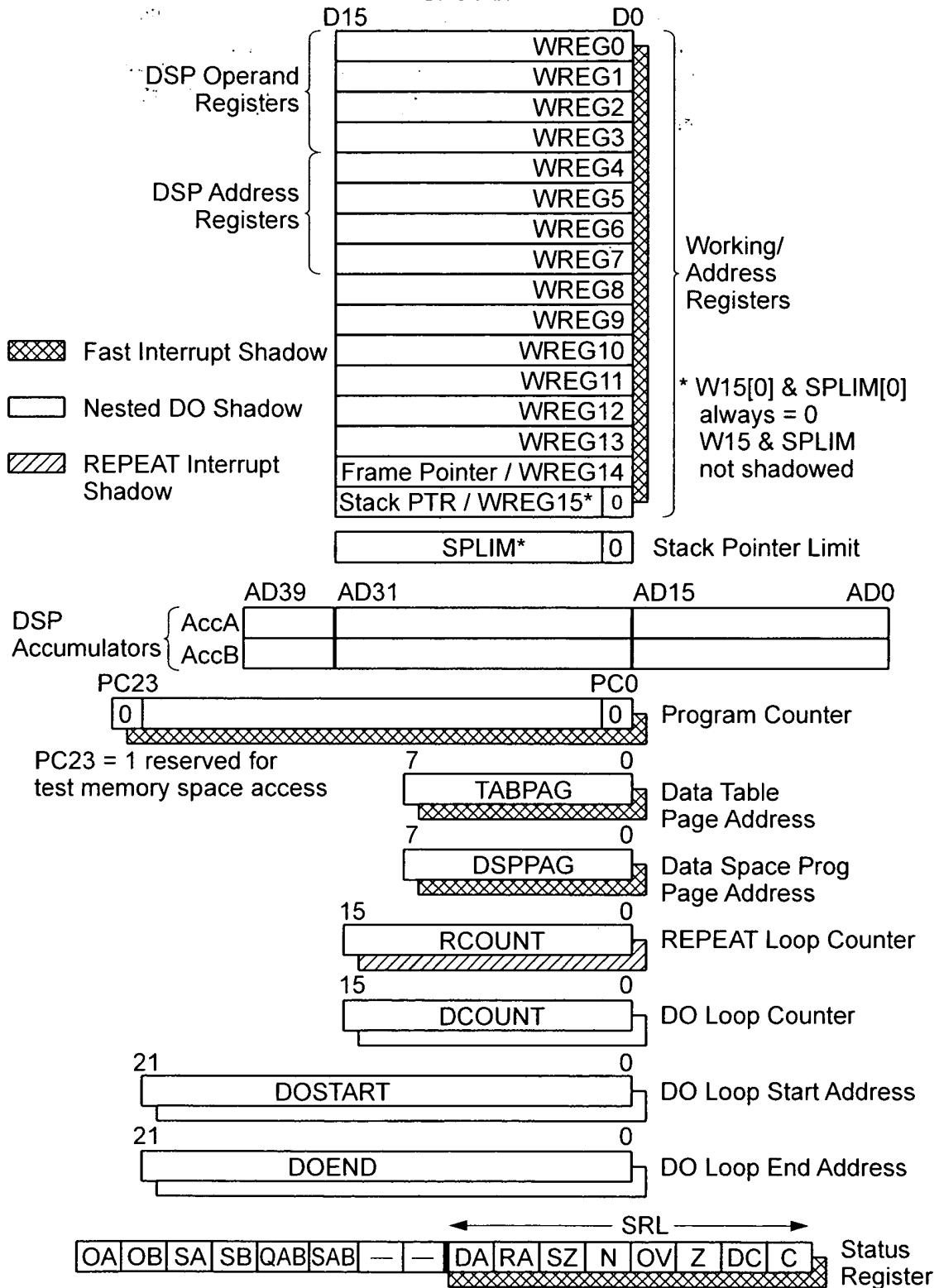


Figure 5

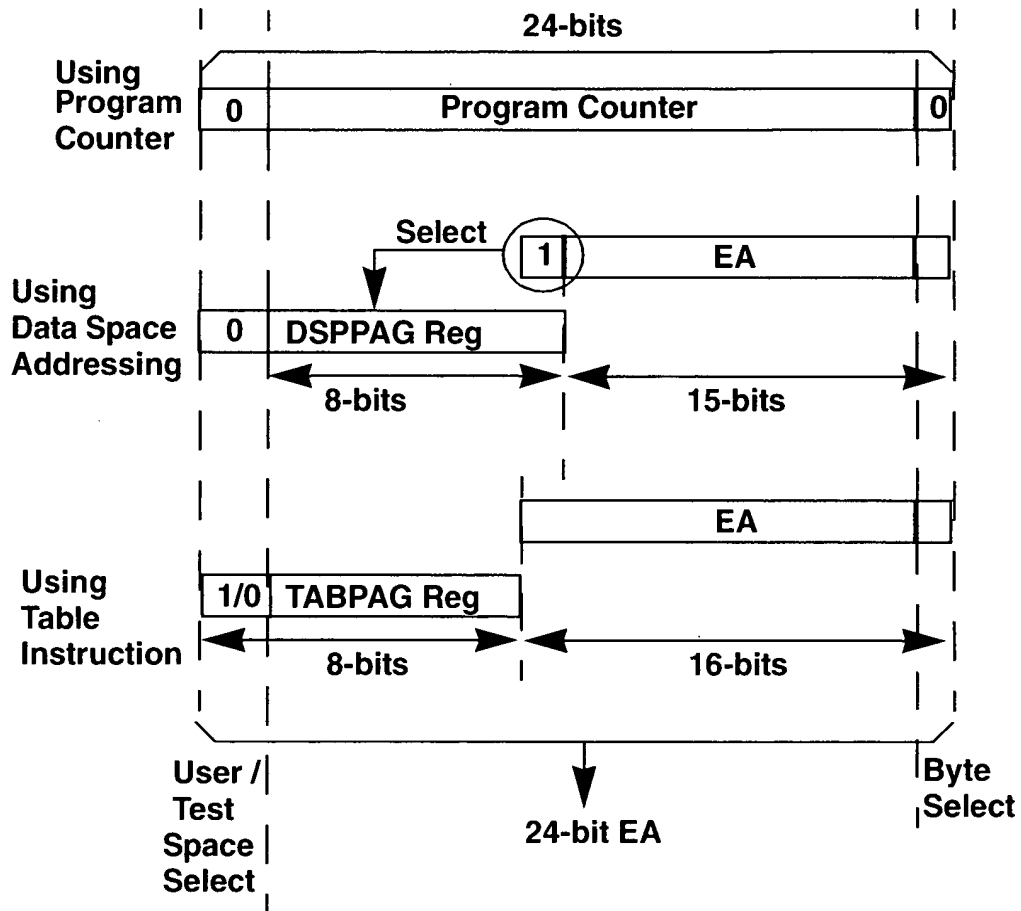


Figure 6

CALL lit23

0000	001s	n ₁₅ nnn	nnnn	nnnn	nnn	0 ₀₁	0
0000	0000	0000	0000	0n ₂₂ nn	nnnn	n ₁₆	

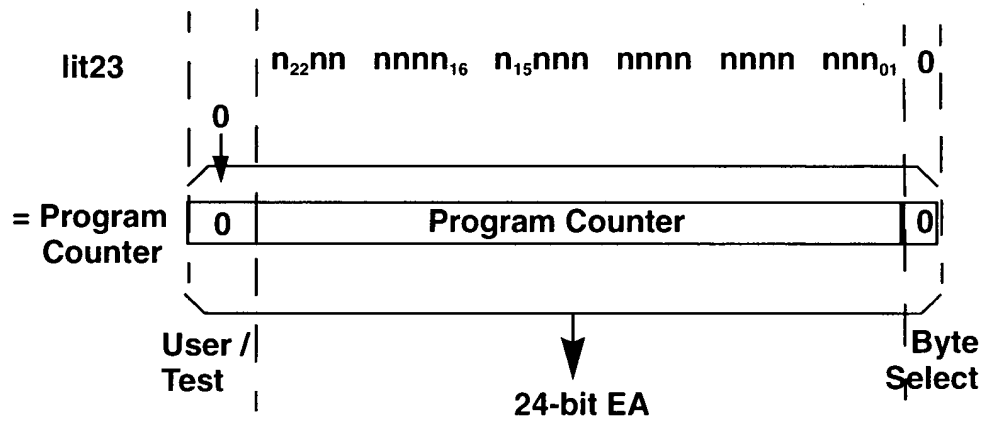


Figure 7

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BRA Slit16

0001 0111 n₁₅nnn nnnn nnnn nnnn₀₀

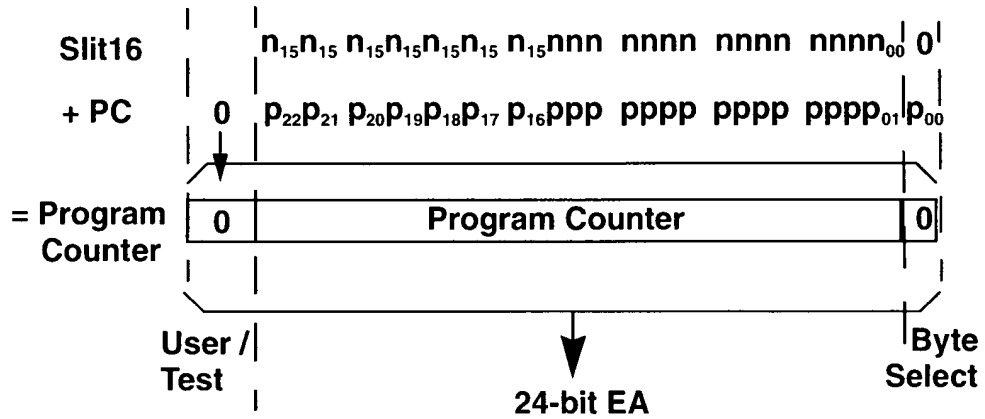


Figure 8

GOTO Wn

0000 0001 0100 0000 0000 ssss

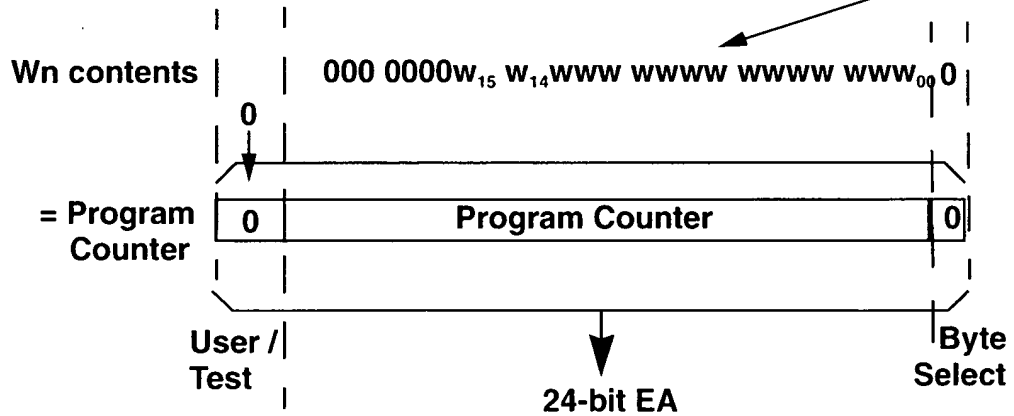
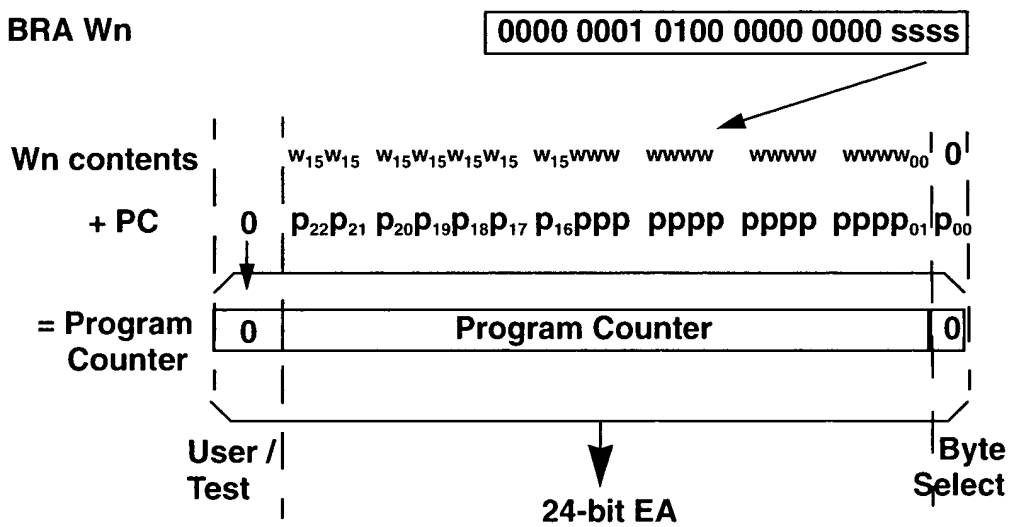


Figure 9

BRA Wn

**Figure 10**

0 0 0 0 0 0 0 0	d ₀₇ d ₀₆ d ₀₅ d ₀₄ d ₀₃ d ₀₂ d ₀₁ d ₀₀
d ₀₇ d ₀₆ d ₀₅ d ₀₄ d ₀₃ d ₀₂ d ₀₁ d ₀₀	0 0 0 0 0 0 0 0
d ₁₅ d ₁₄ d ₁₃ d ₁₂ d ₁₁ d ₁₀ d ₀₉ d ₀₈	d ₀₇ d ₀₆ d ₀₅ d ₀₄ d ₀₃ d ₀₂ d ₀₁ d ₀₀
d ₁₅ d ₁₄ d ₁₃ d ₁₂ d ₁₁ d ₁₀ d ₀₉ d ₀₈	d ₀₇ d ₀₆ d ₀₅ d ₀₄ d ₀₃ d ₀₂ d ₀₁ d ₀₀
d ₃₁ d ₃₀ d ₂₉ d ₂₈ d ₂₇ d ₂₆ d ₂₅ d ₂₄	d ₂₃ d ₂₂ d ₂₁ d ₂₀ d ₁₉ d ₁₈ d ₁₇ d ₁₆
d ₁₅ d ₁₄ d ₁₃ d ₁₂ d ₁₁ d ₁₀ d ₀₉ d ₀₈	d ₀₇ d ₀₆ d ₀₅ d ₀₄ d ₀₃ d ₀₂ d ₀₁ d ₀₀
d ₃₁ d ₃₀ d ₂₉ d ₂₈ d ₂₇ d ₂₆ d ₂₅ d ₂₄	d ₂₃ d ₂₂ d ₂₁ d ₂₀ d ₁₉ d ₁₈ d ₁₇ d ₁₆
d ₄₇ d ₄₆ d ₄₅ d ₄₄ d ₄₃ d ₄₂ d ₄₁ d ₄₀	d ₃₉ d ₃₈ d ₃₇ d ₃₆ d ₃₅ d ₃₄ d ₃₃ d ₃₂
d ₆₃ d ₆₂ d ₆₁ d ₆₀ d ₅₉ d ₅₈ d ₅₇ d ₅₆	d ₅₅ d ₅₄ d ₅₃ d ₅₂ d ₅₁ d ₅₀ d ₄₉ d ₄₈
0 0 0 0 0 0 0 0	d ₀₇ d ₀₆ d ₀₅ d ₀₄ d ₀₃ d ₀₂ d ₀₁ d ₀₀

Byte @ 0x0100

Byte @ 0x0103

Word @ 0x0104

DWord @ 0x0106

QWord @ 0x010A

Byte @ 0x0112

Figure 11

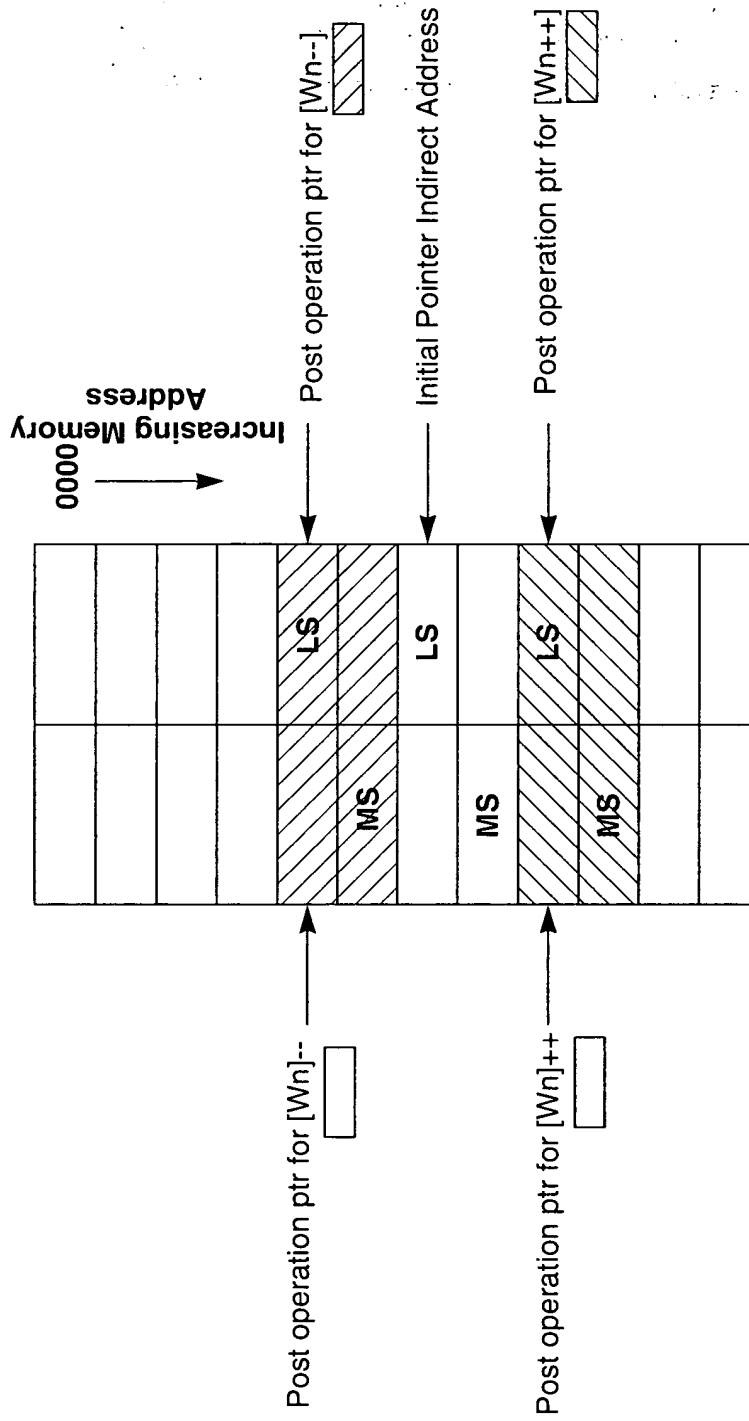


Figure 12

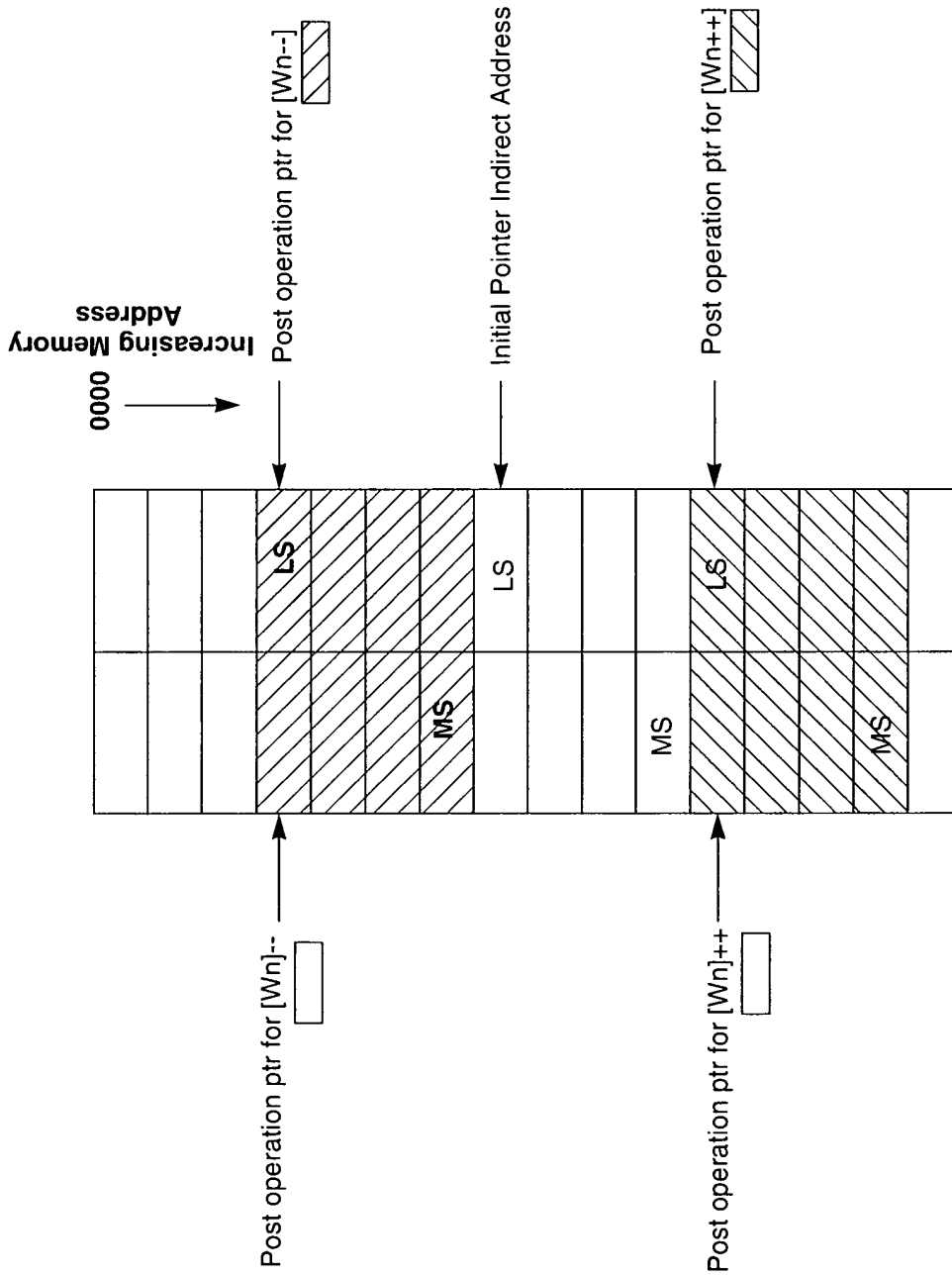


Figure 13

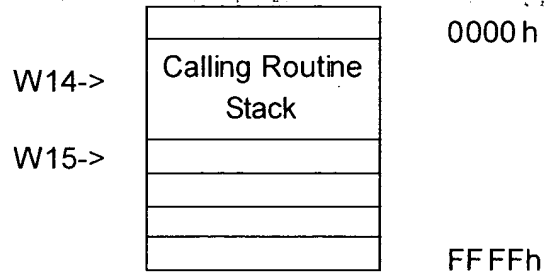


Figure 14

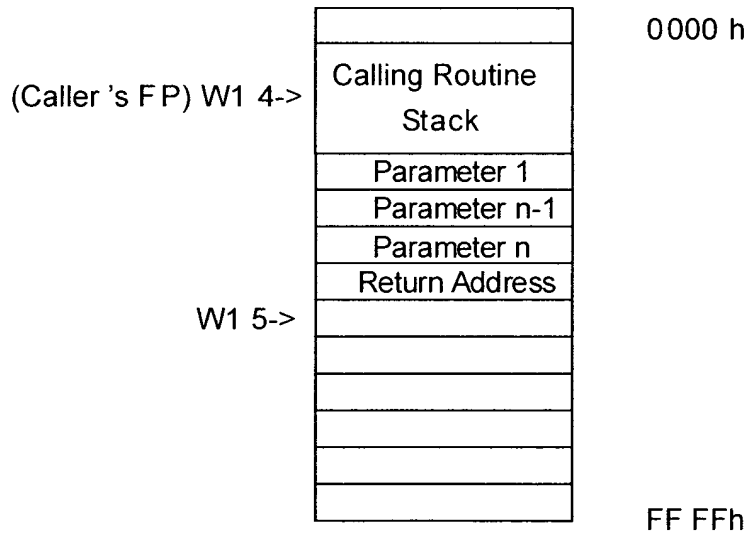


Figure 15

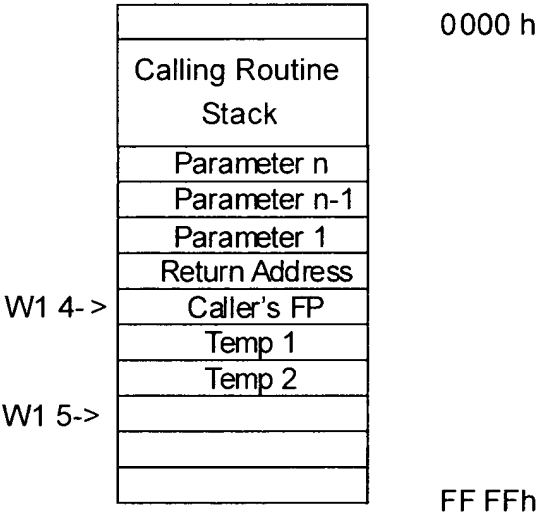


Figure 16

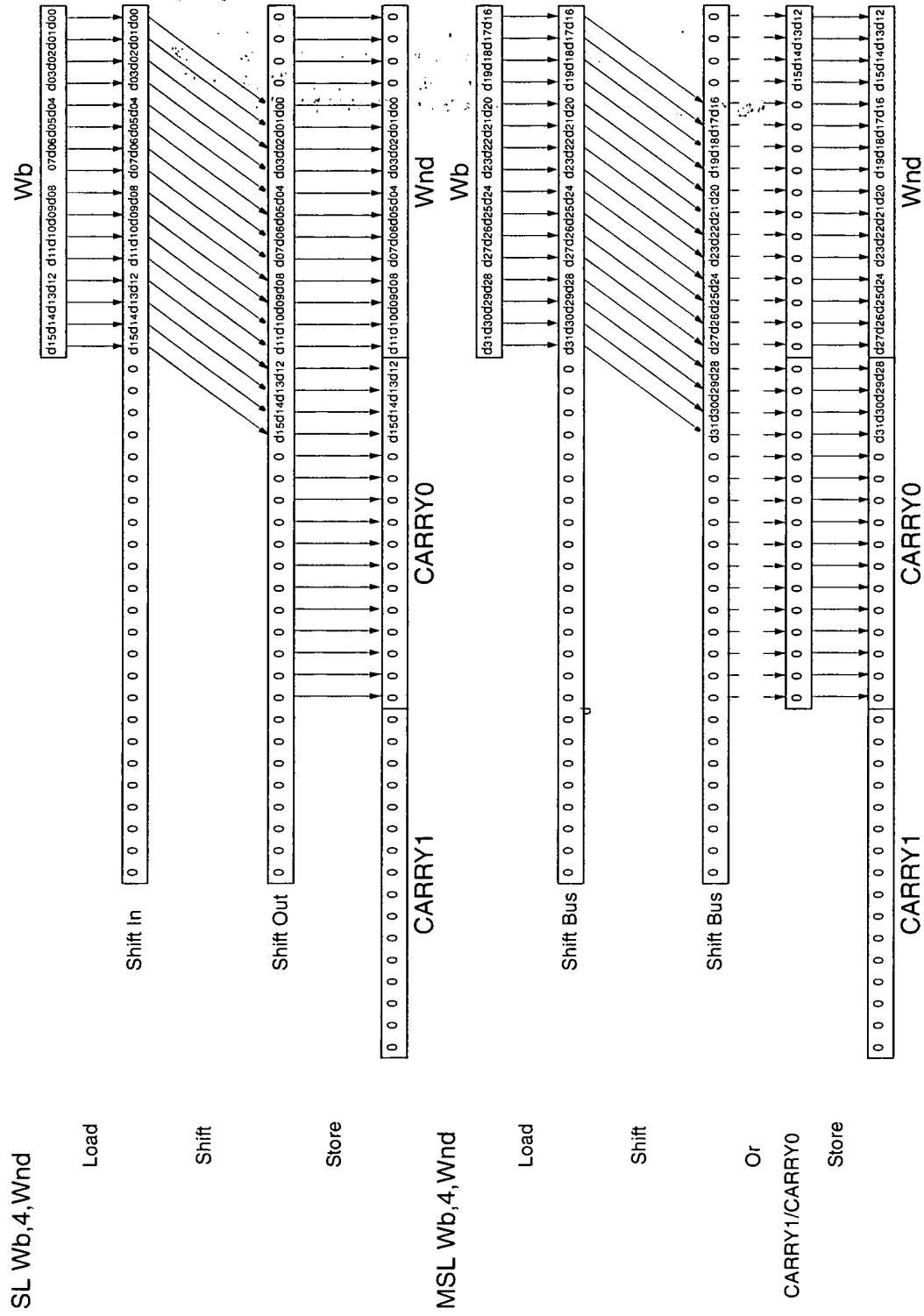


Figure 17

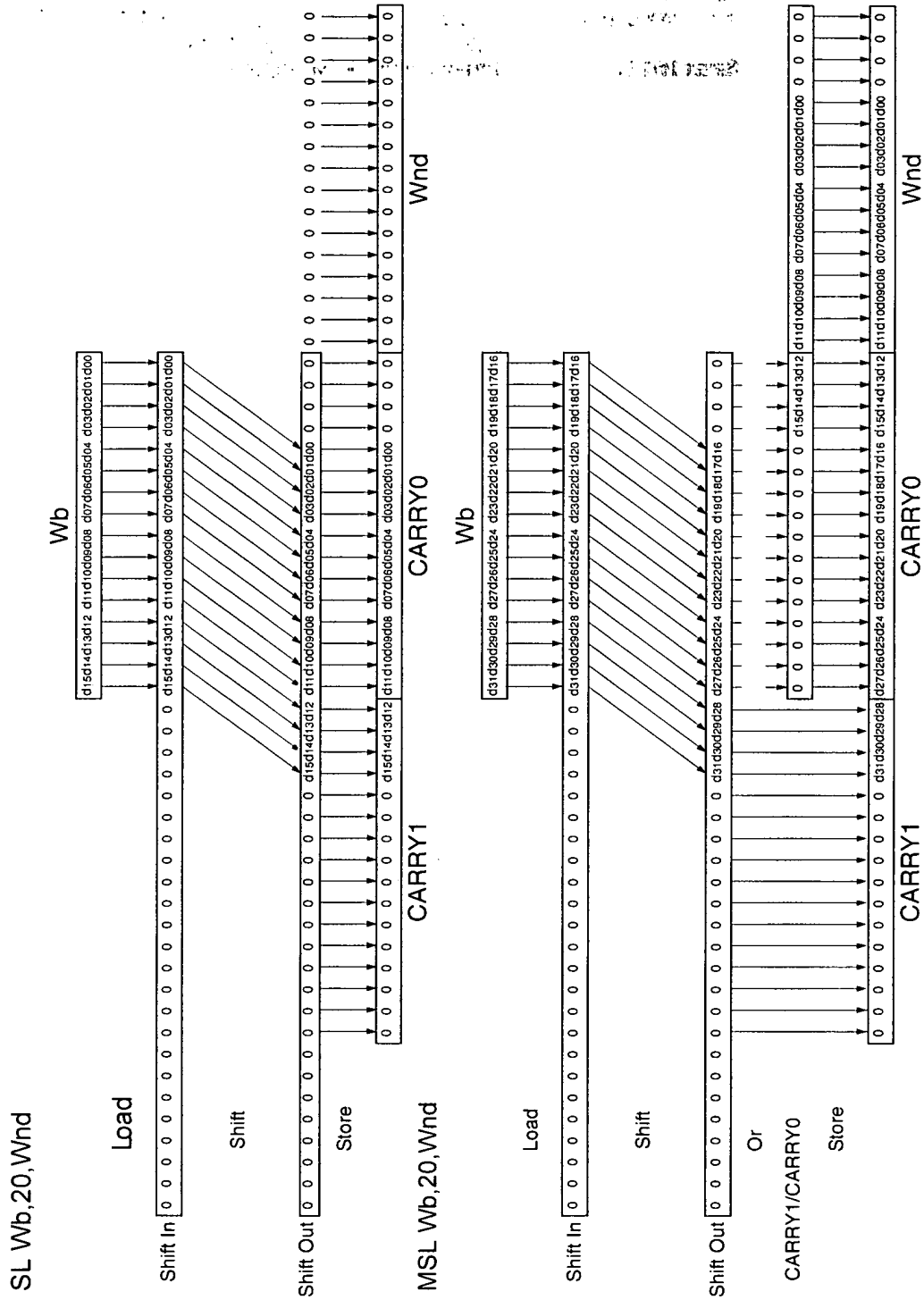


Figure 18

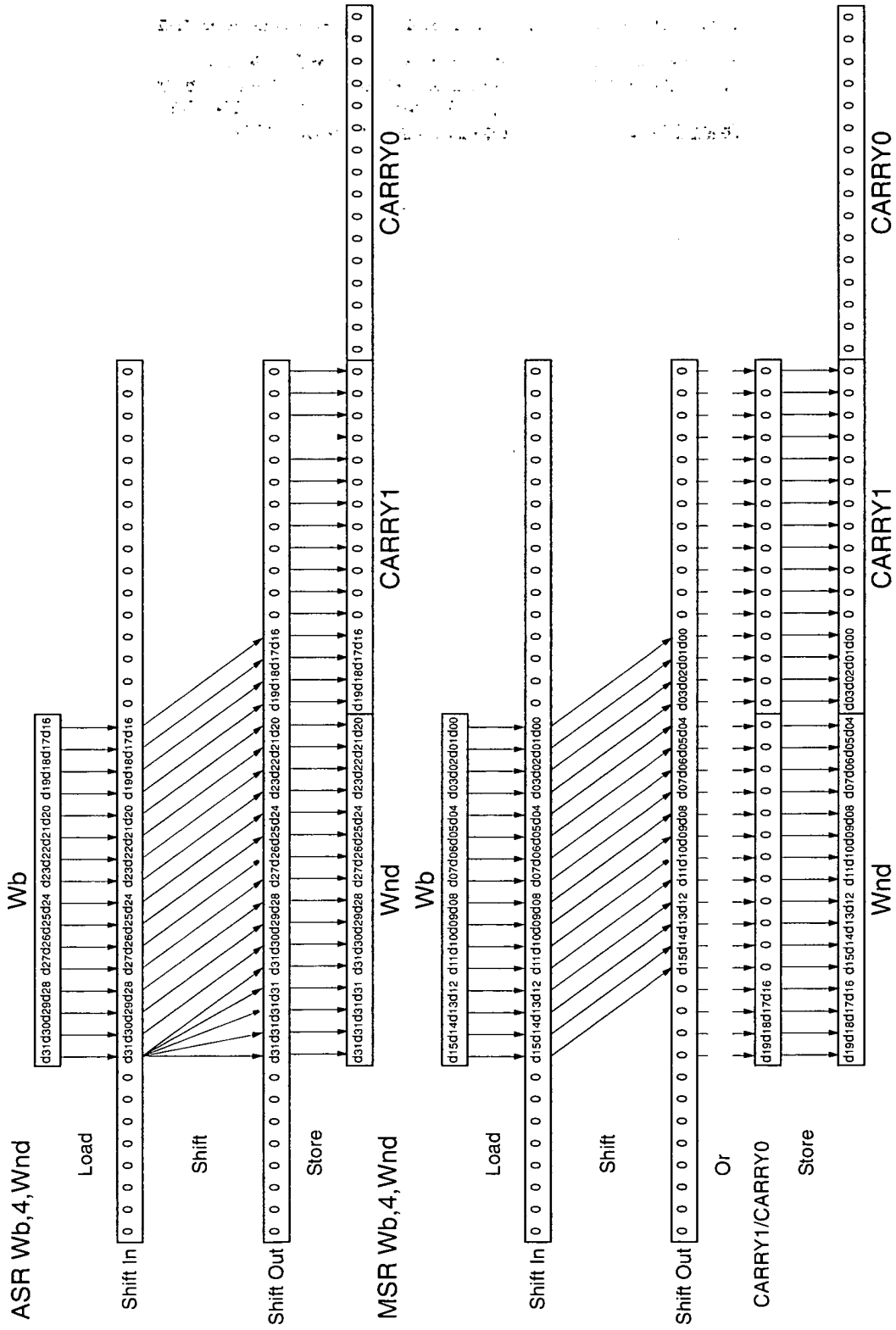


Figure 19

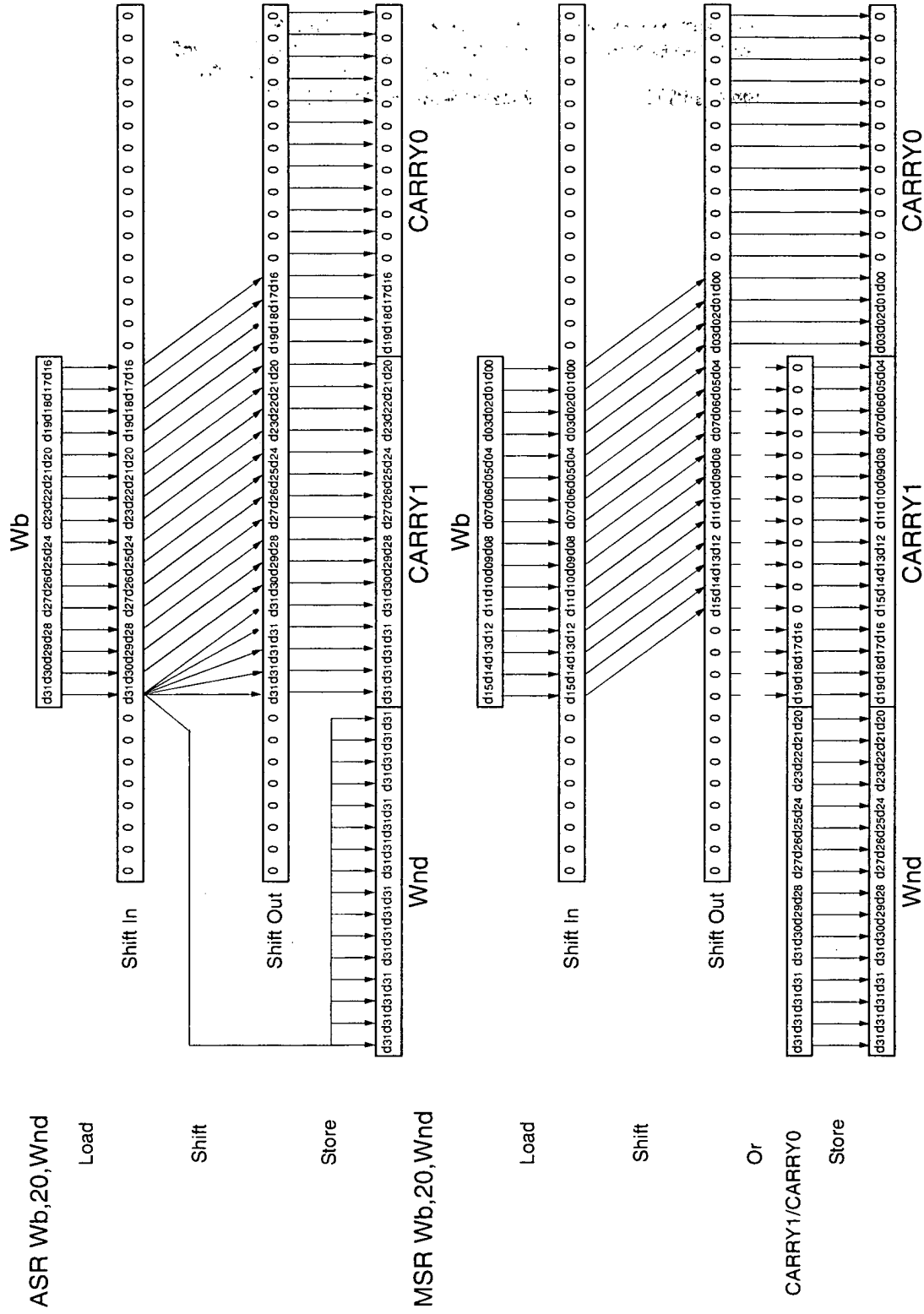


Figure 20

Different representations of 0x4001

Integer:

0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2^0	2^{15}	2^{14}	2^{13}	2^{12}	...											2^0

$$0x4001 = 2^{14} + 2^0 = 16385$$

Q1.15 Fractional:

0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
2^0	2^{-1}	2^{-2}	2^{-3}	...												2^{-15}

$$0x4001 = 2^{-1} + 2^{-15} = 0.500030518$$

Figure 21

W0=2
LCR=2
LSR=00E002
LER=00E00A

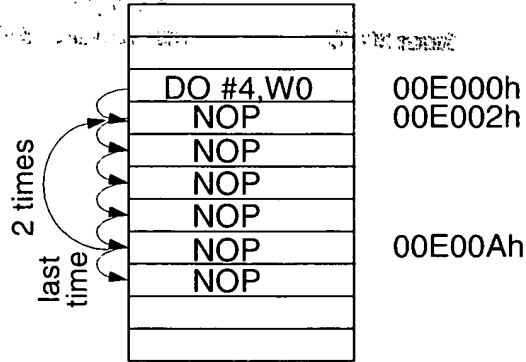


Figure 22

W0=2
LCR=2
LSR=00E002
LER=00E00A

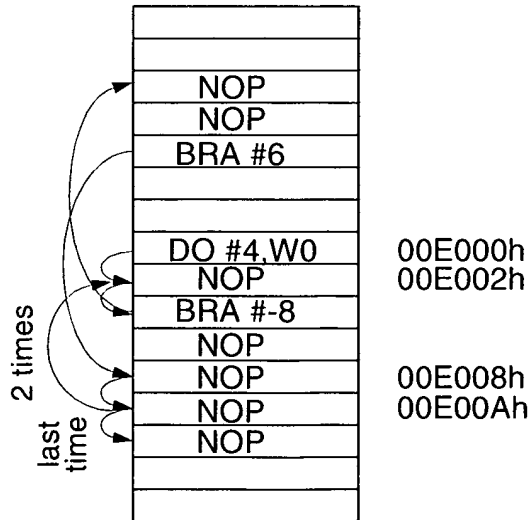
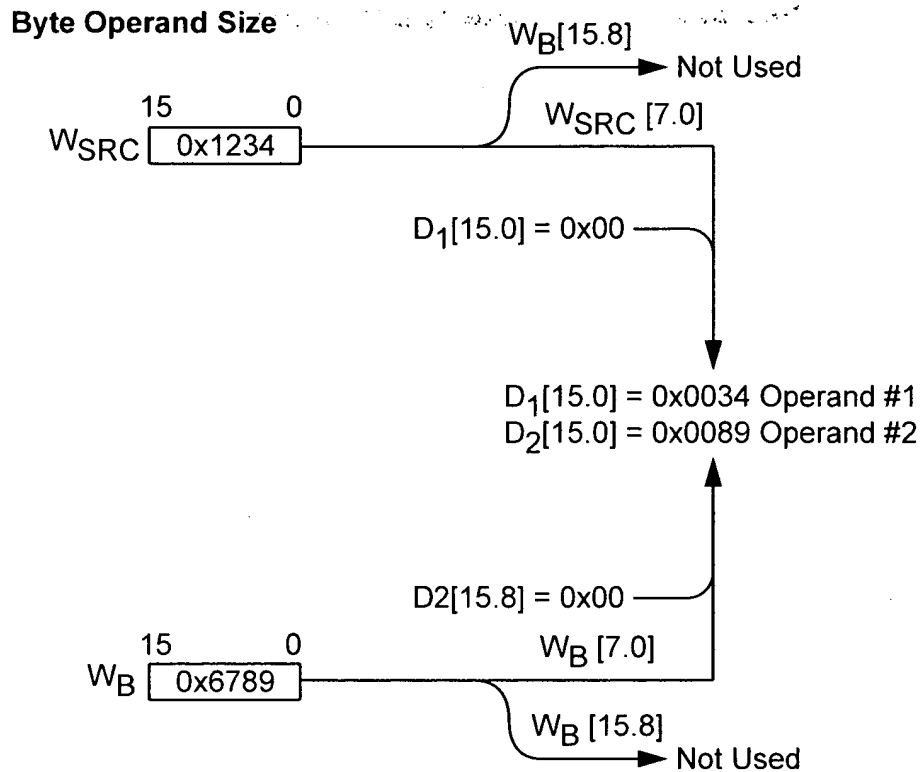


Figure 23



Word Operand Size

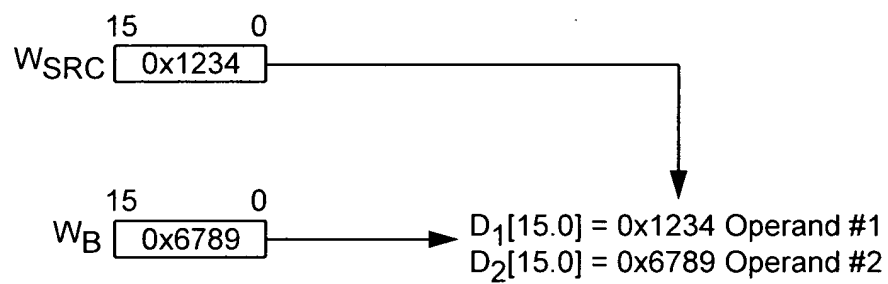
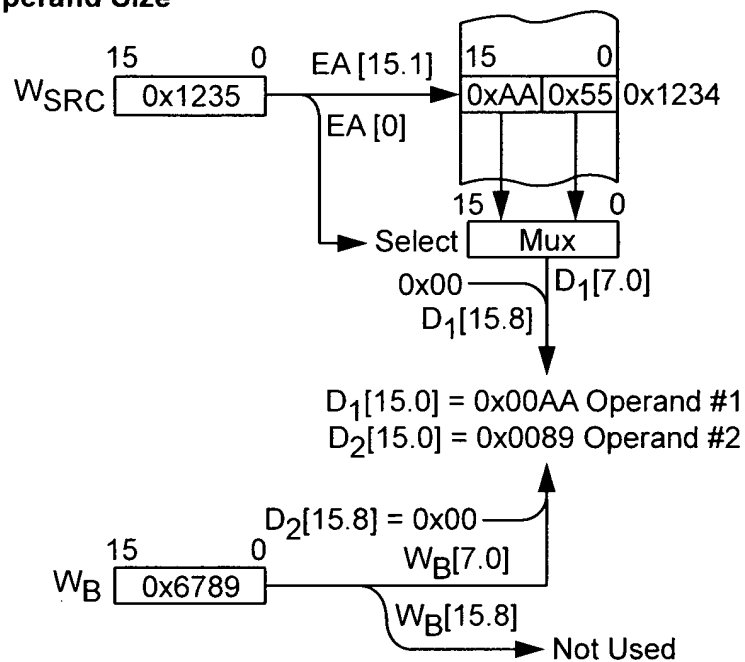


Figure 24

Byte Operand Size



Word Operand Size

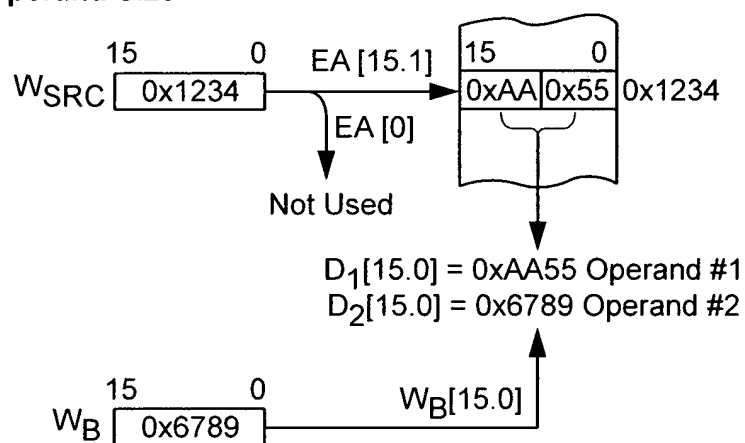
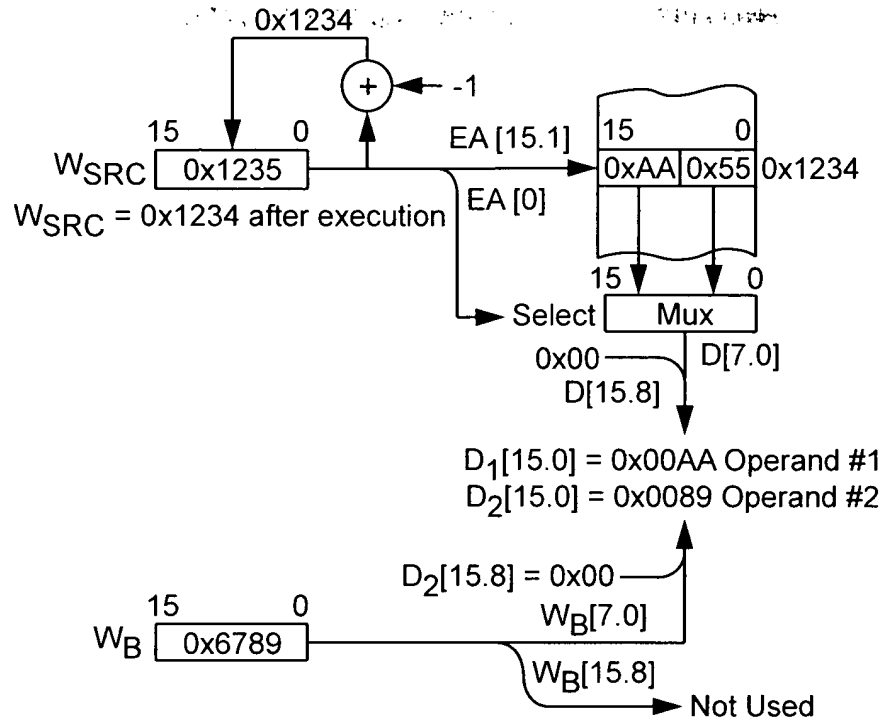


Figure 25

Byte Operand Size



Word Operand Size

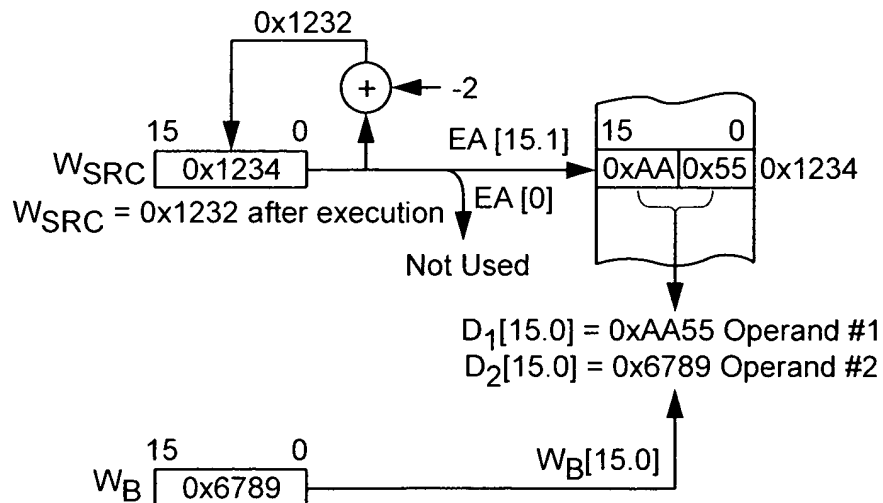
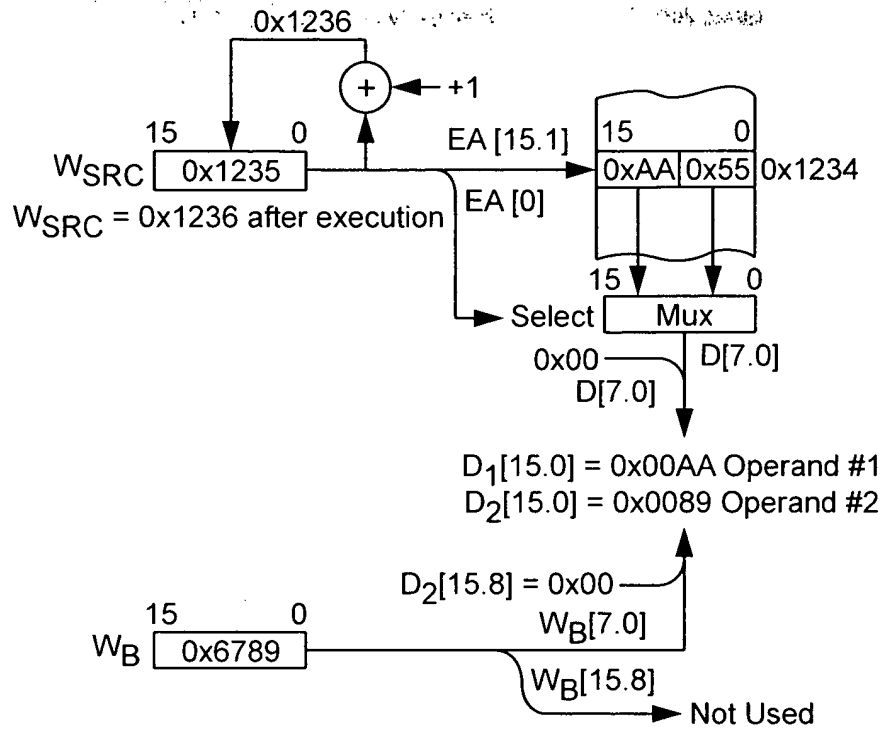


Figure 26

Byte Operand Size



Word Operand Size

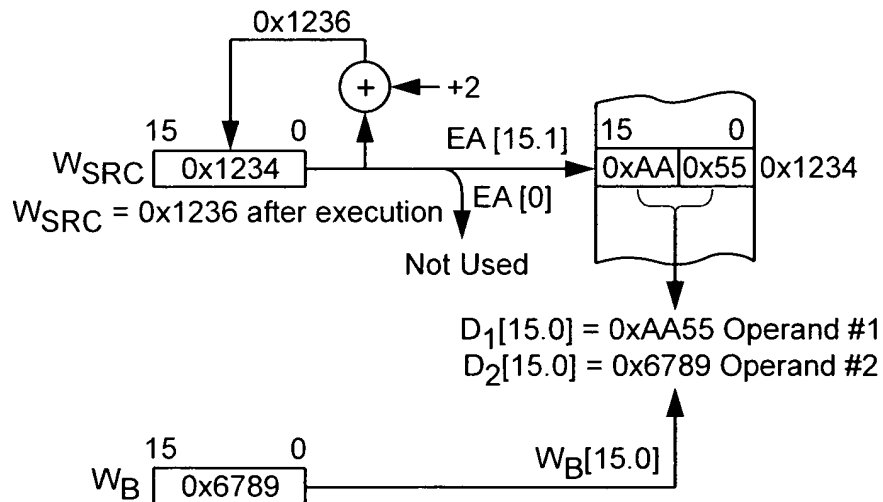
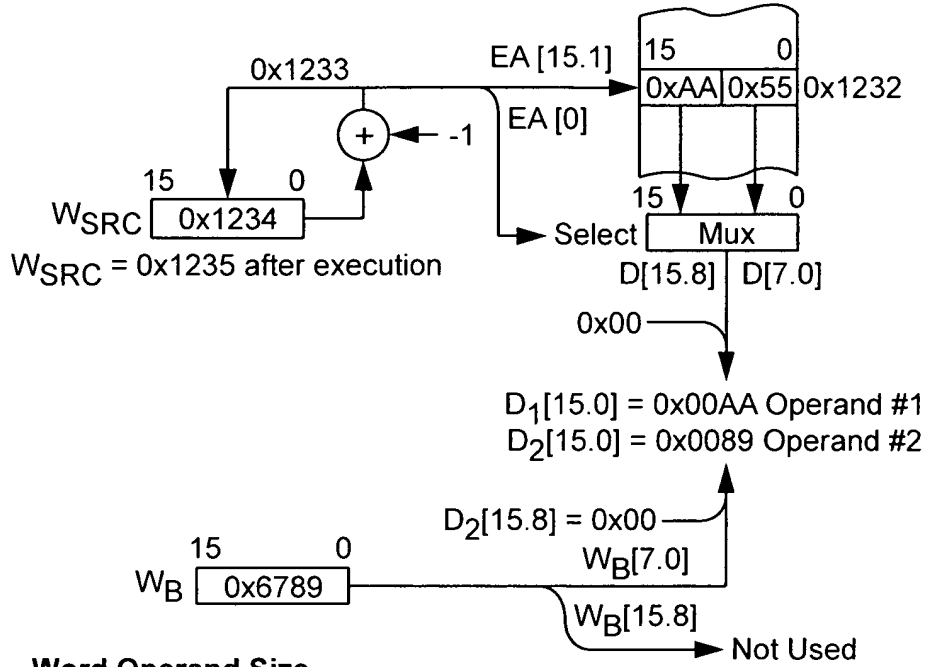


Figure 27

Byte Operand Size



Word Operand Size

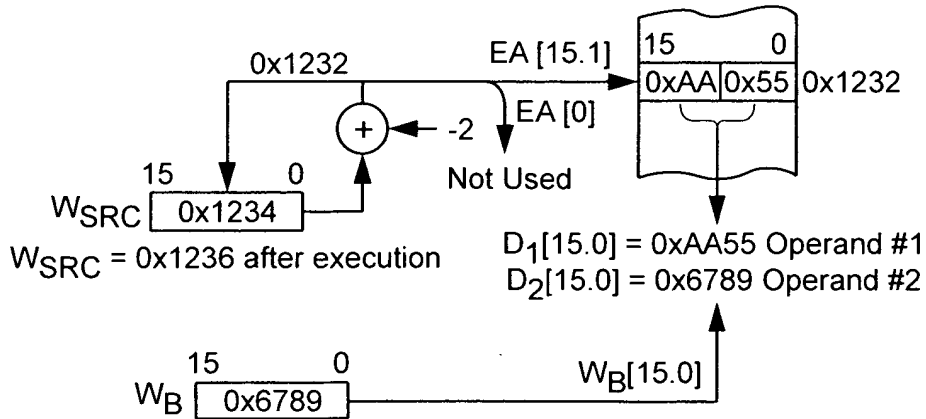
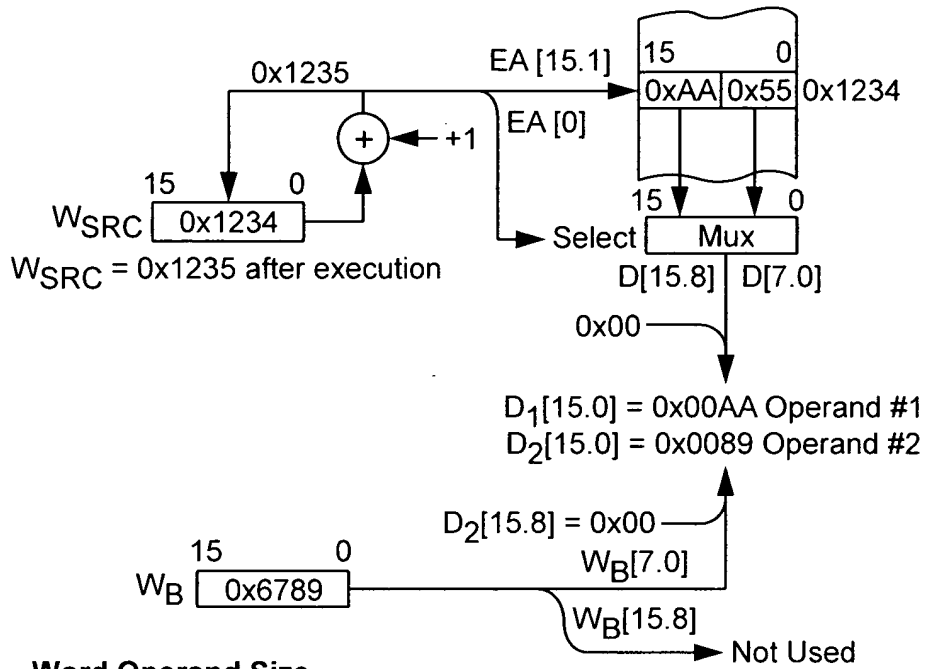


Figure 28

Byte Operand Size



Word Operand Size

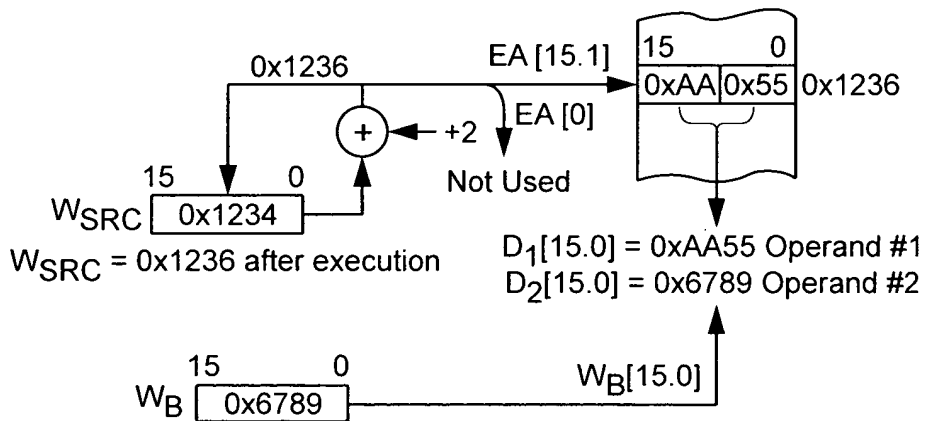
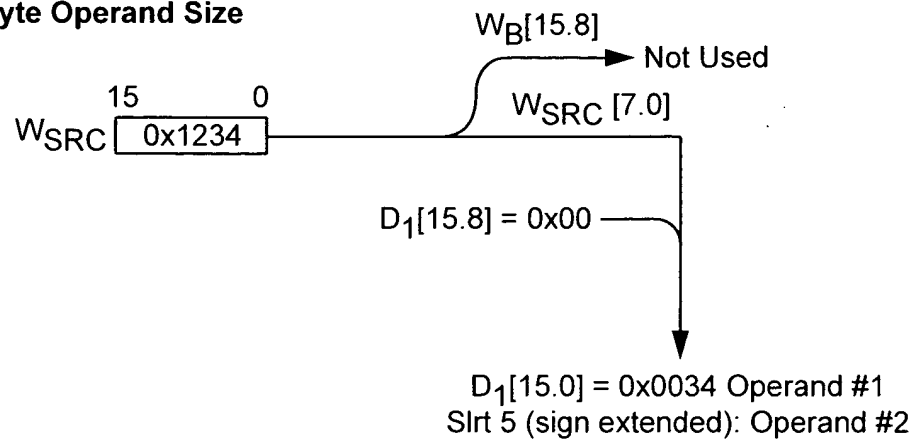
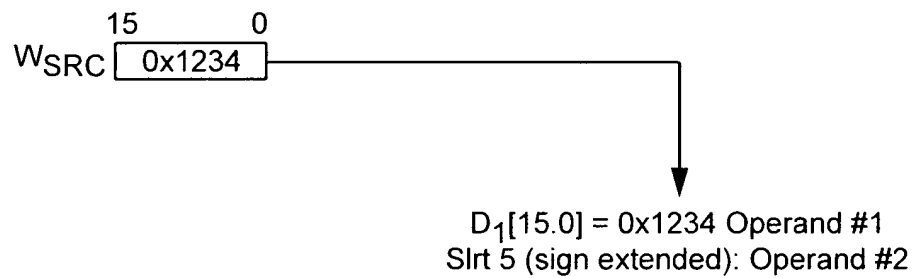
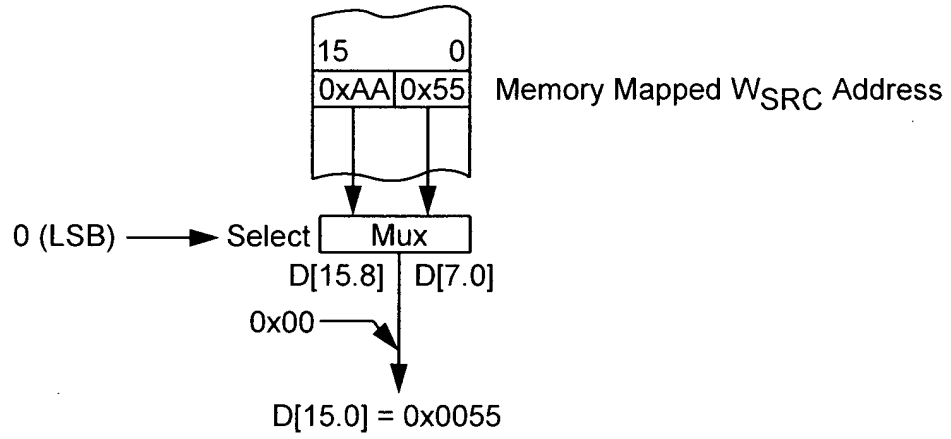


Figure 29

Byte Operand Size**Word Operand Size****Figure 30**

Byte Operand Size



Word Operand Size

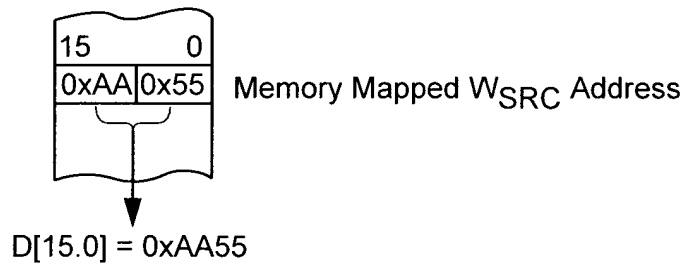
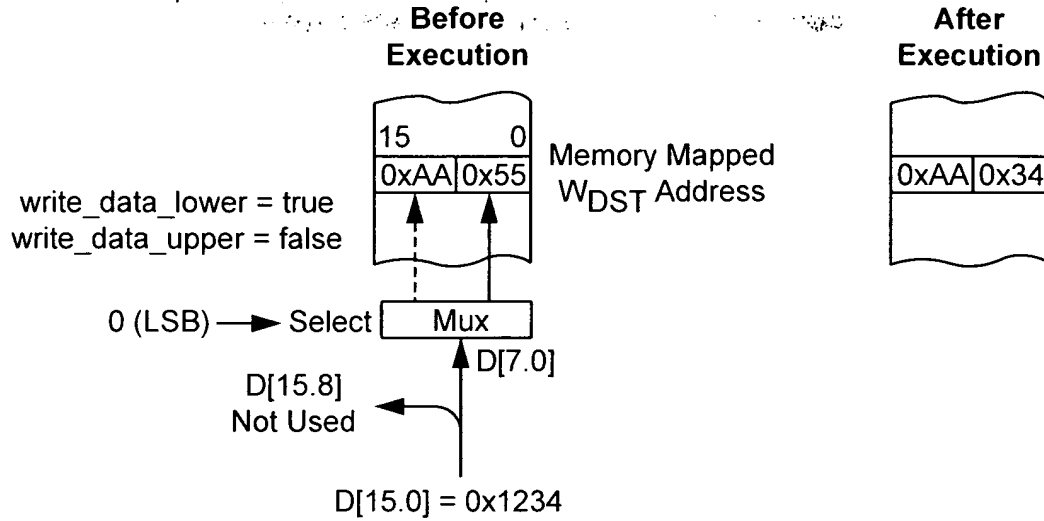


Figure 31

Byte Operand Size



Word Operand Size

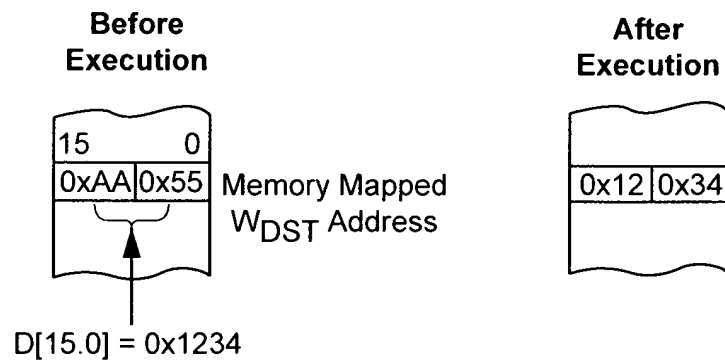
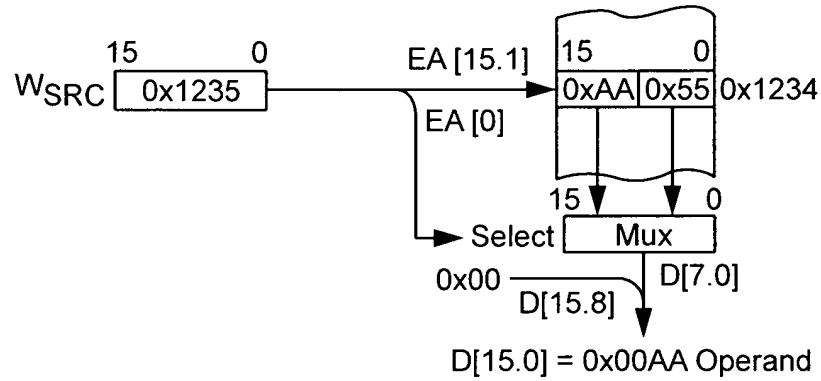
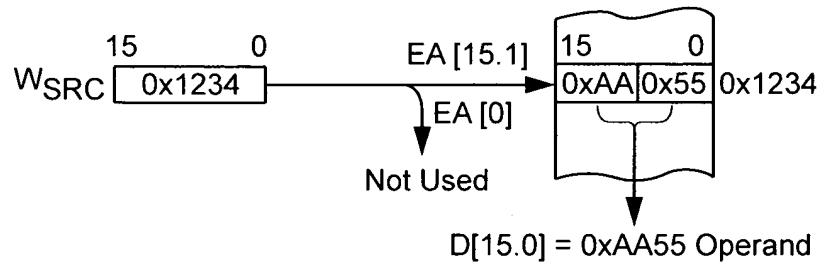
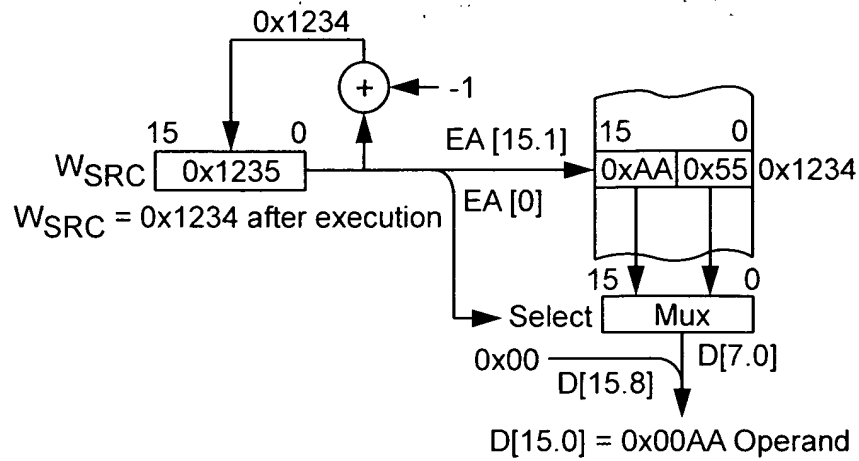


Figure 32

Byte Operand Size**Word Operand Size****Figure 33**



Byte Operand Size



Word Operand Size

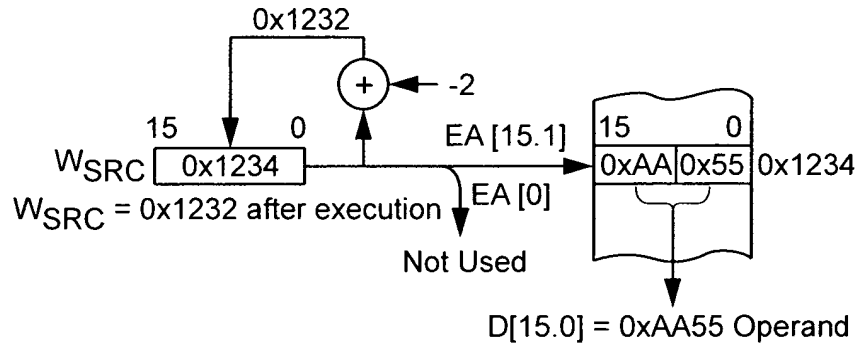


Figure 35

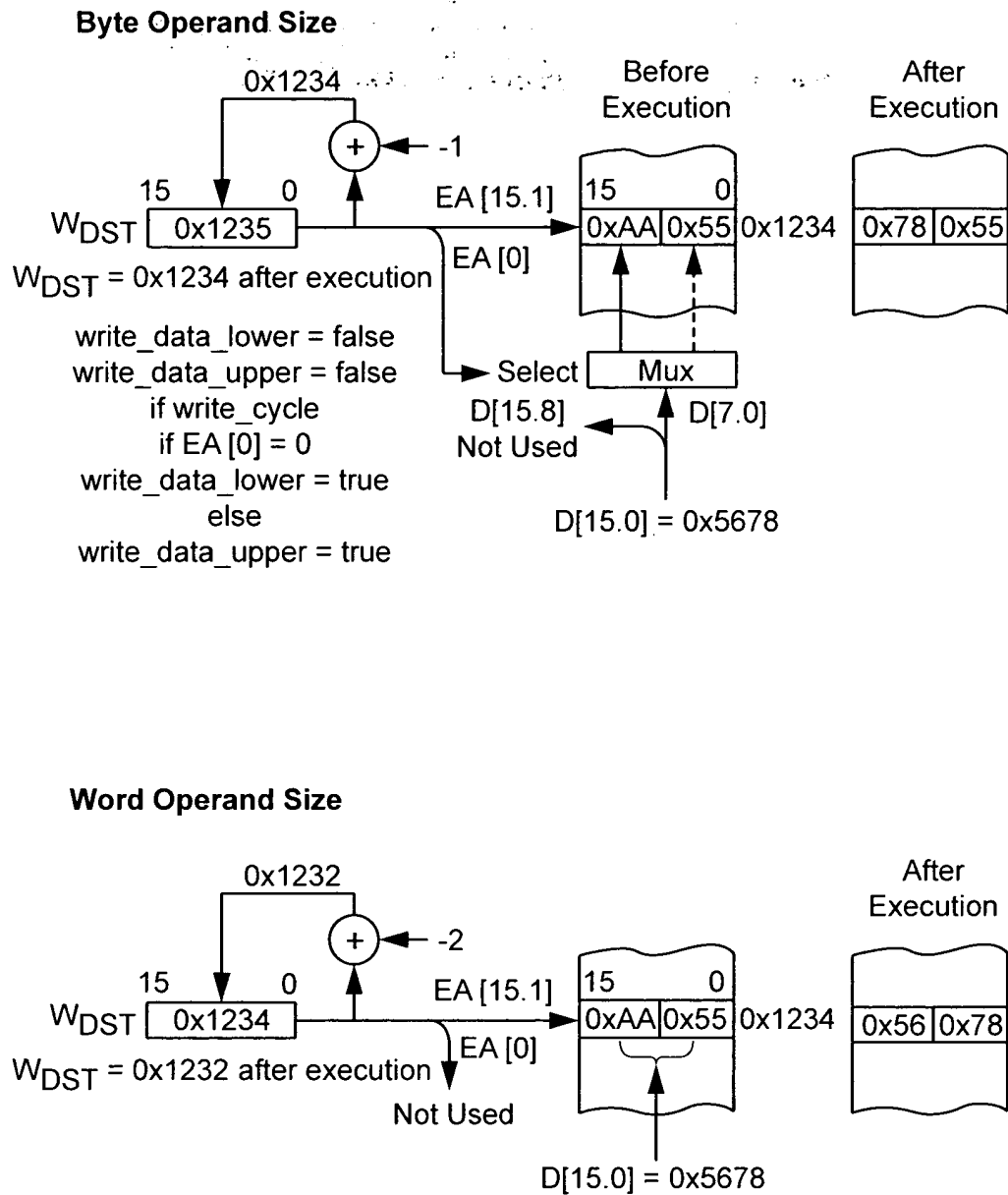
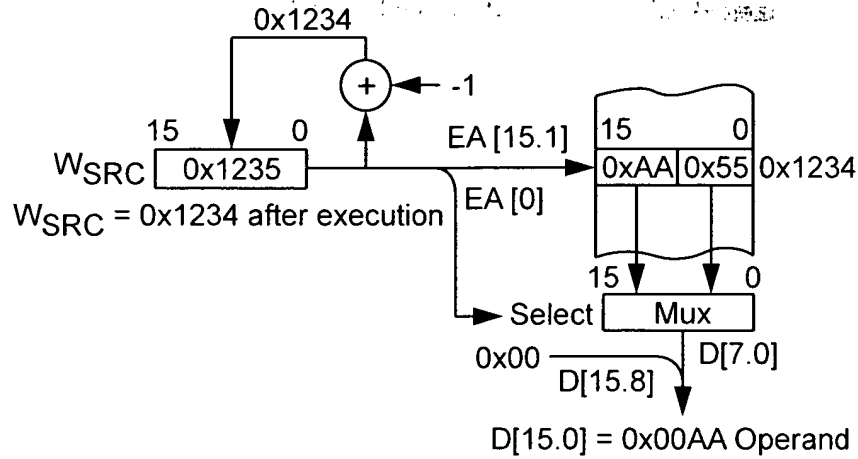


Figure 36

Byte Operand Size



Word Operand Size

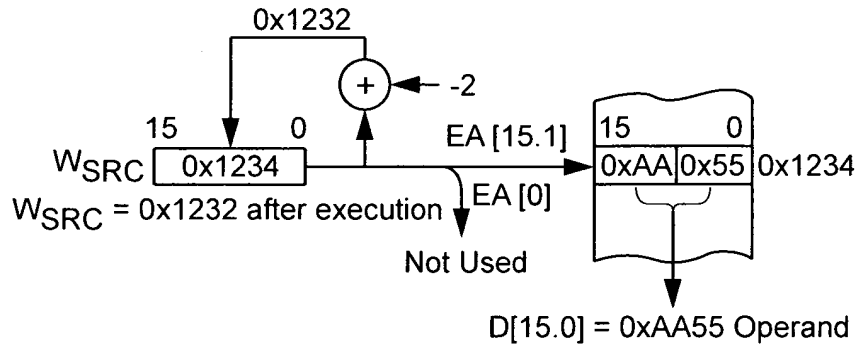


Figure 37

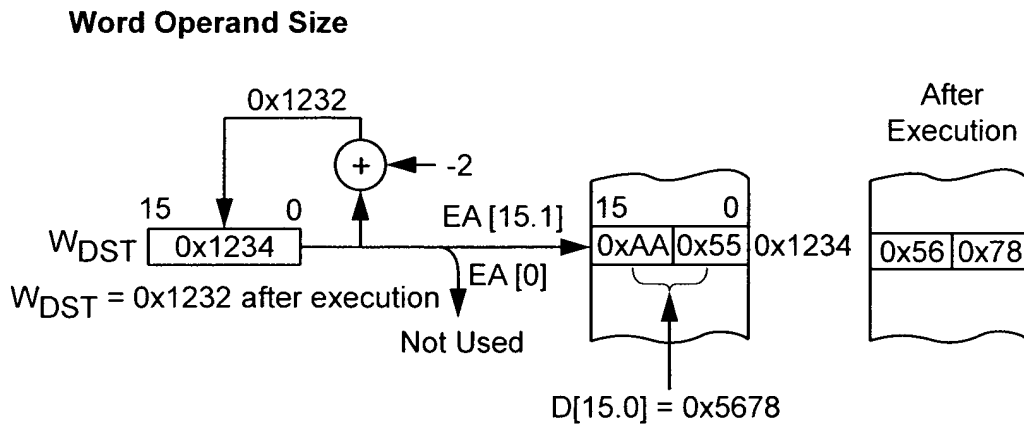
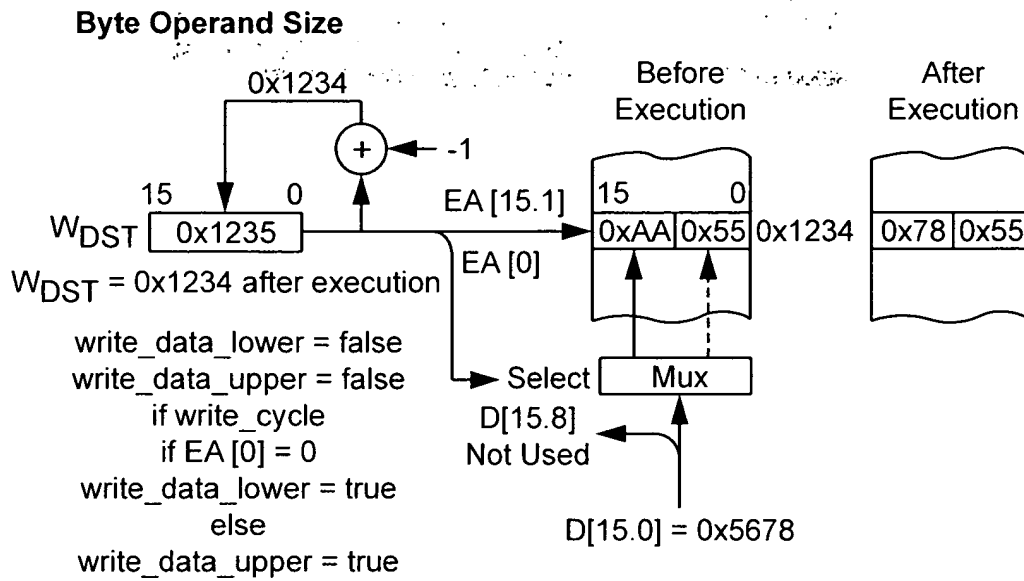
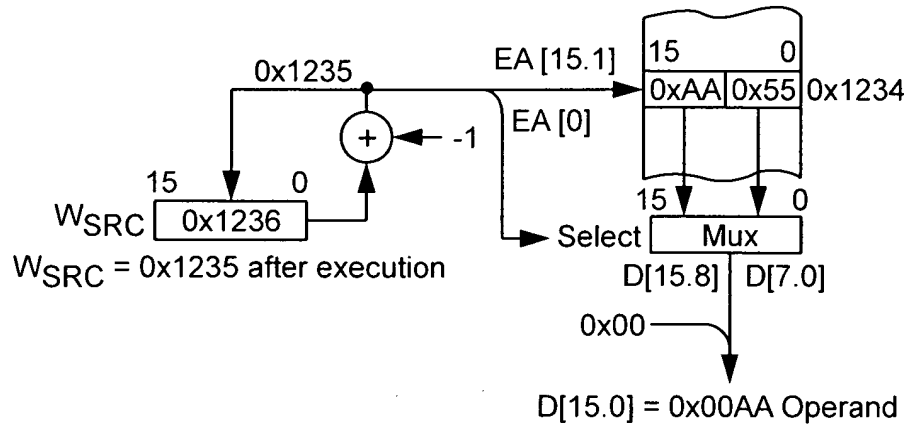


Figure 38

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Byte Operand Size



Word Operand Size

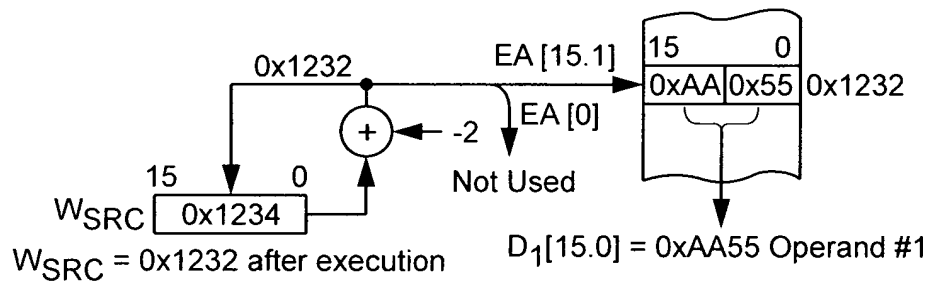
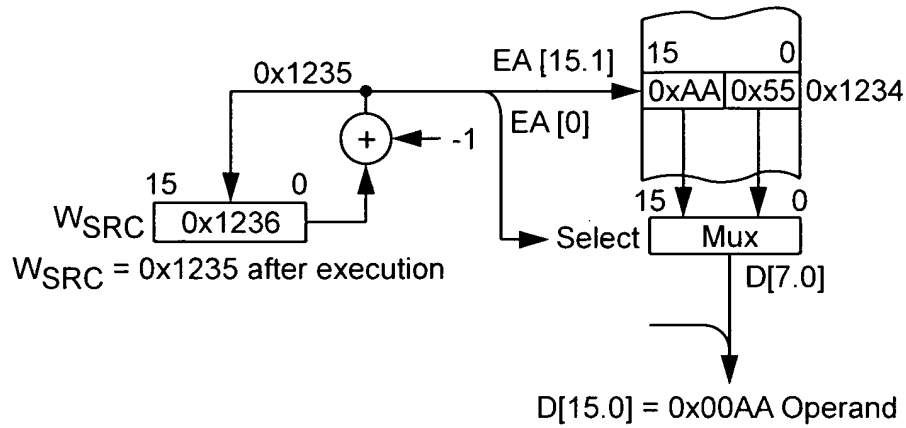
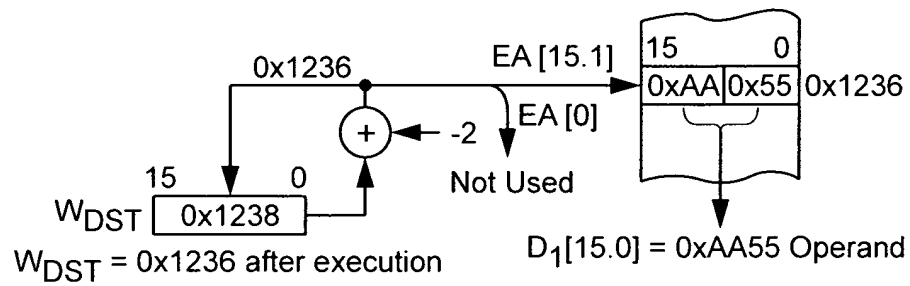
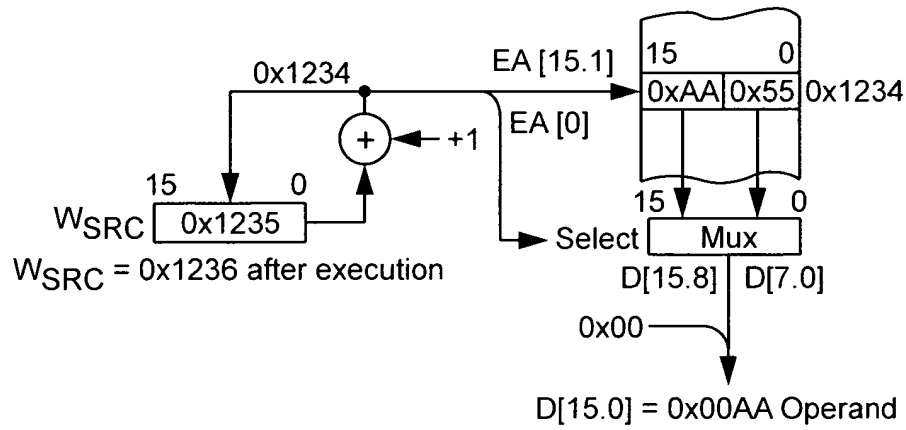


Figure 39

Byte Operand Size**Word Operand Size****Figure 40**

Byte Operand Size



Word Operand Size

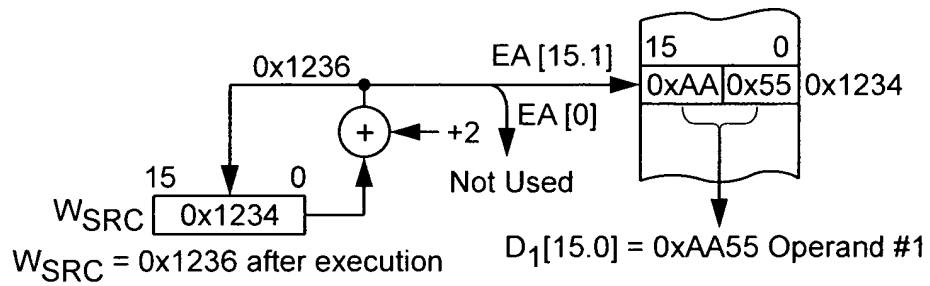
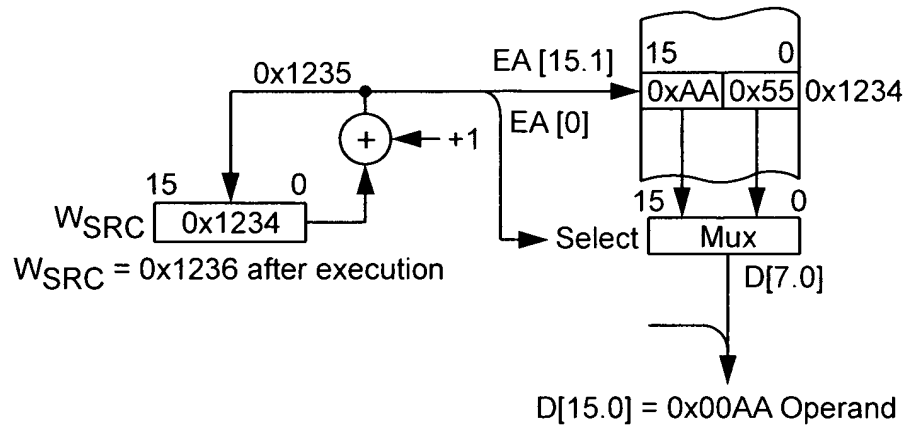


Figure 41

Byte Operand Size



Word Operand Size

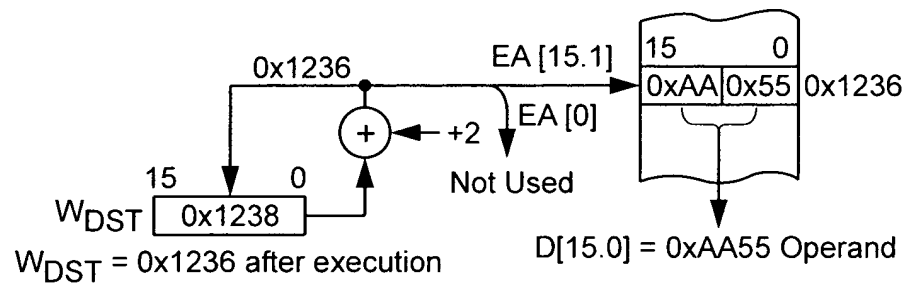
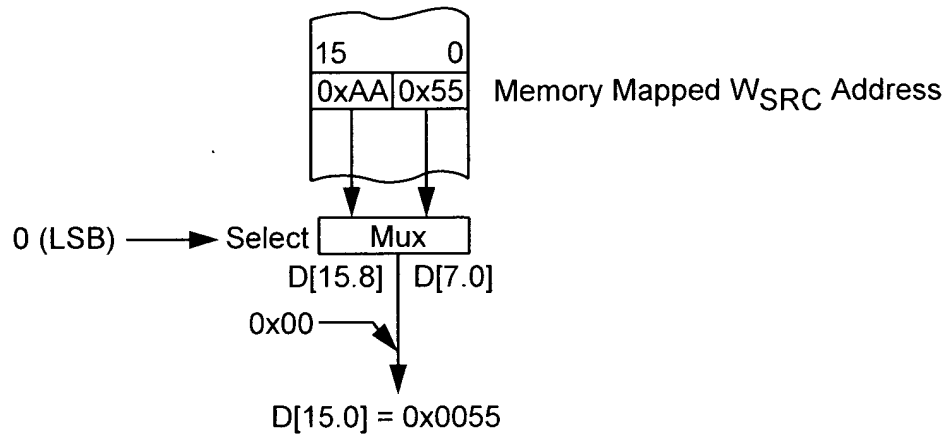


Figure 42

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Byte Operand Size



Word Operand Size

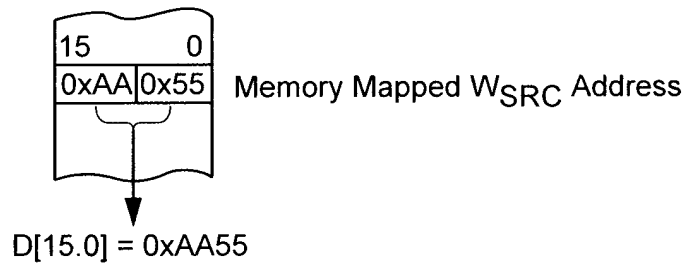
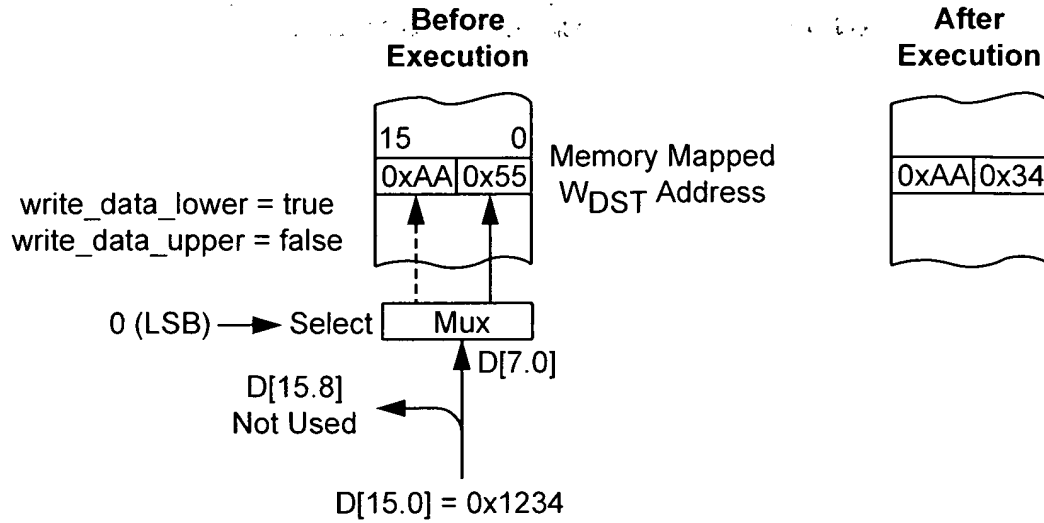


Figure 43

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Byte Operand Size



Word Operand Size

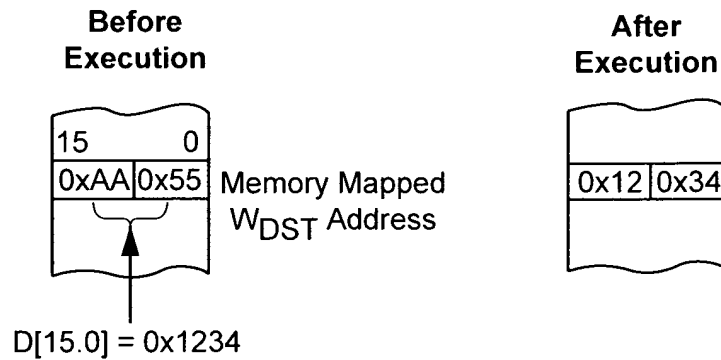
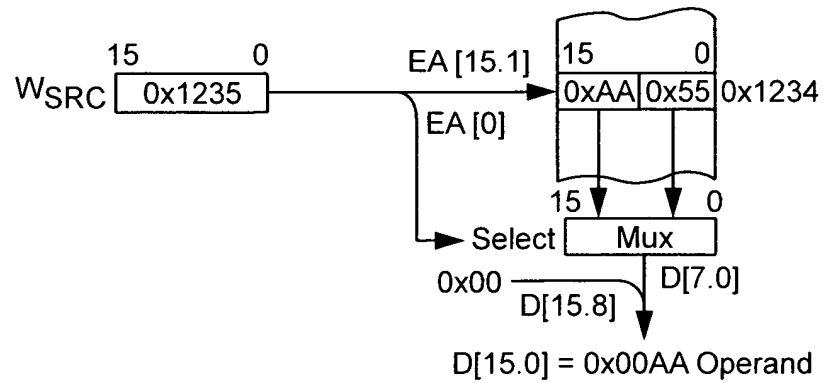
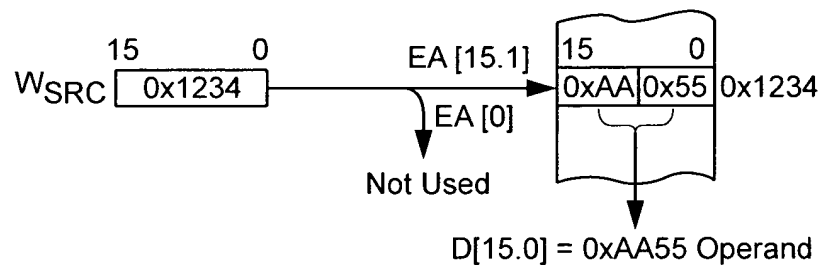
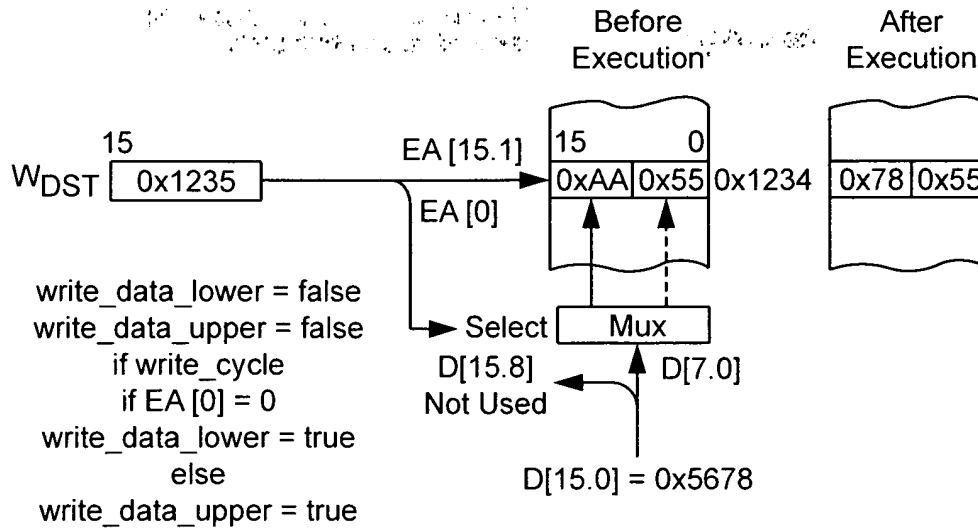
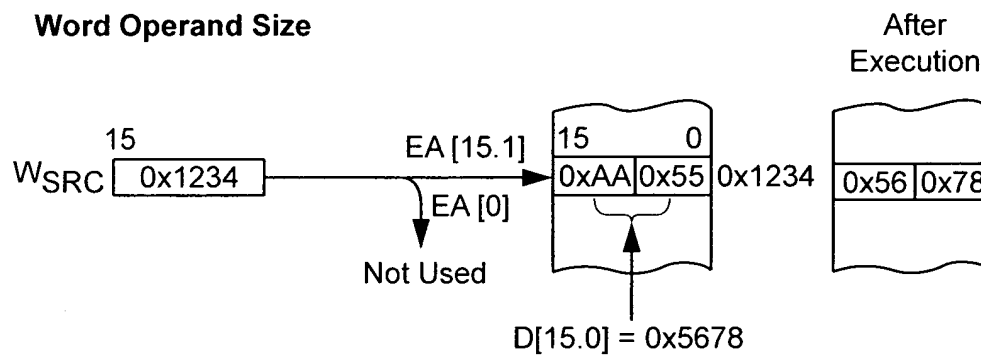


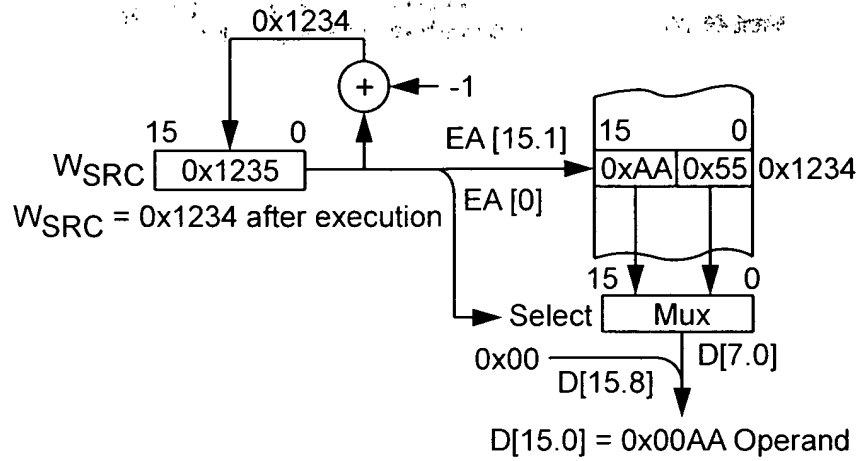
Figure 44

Byte Operand Size**Word Operand Size****Figure 45**

Byte Operand Size**Word Operand Size****Figure 46**

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Byte Operand Size



Word Operand Size

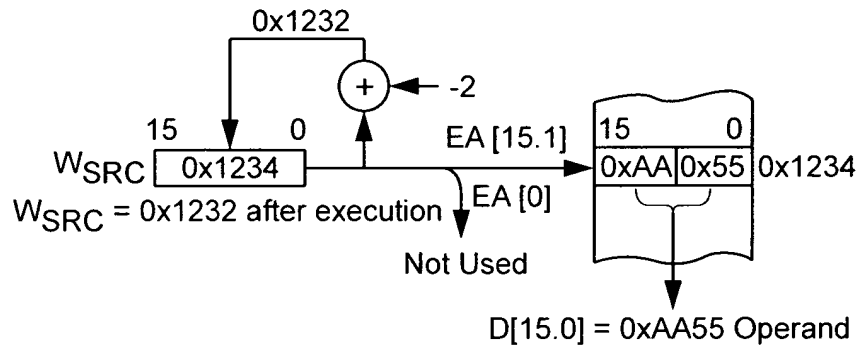
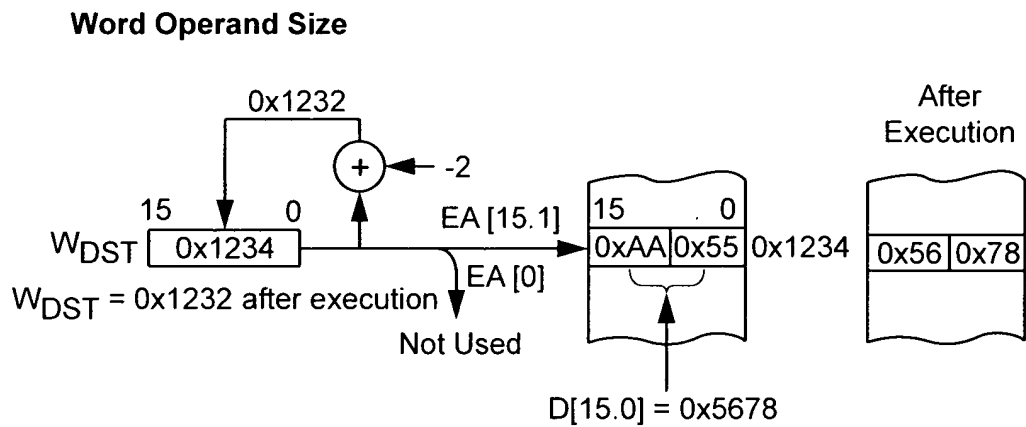
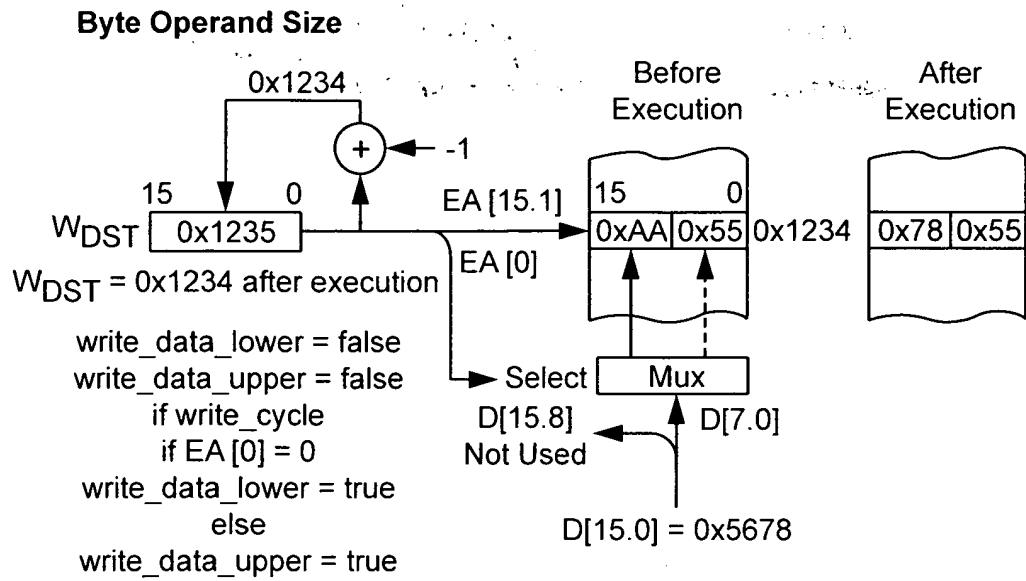
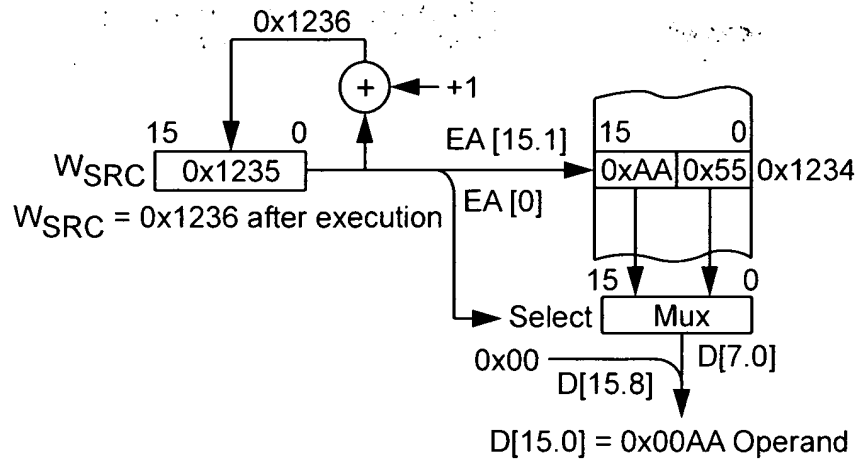


Figure 47

**Figure 48**

Byte Operand Size



Word Operand Size

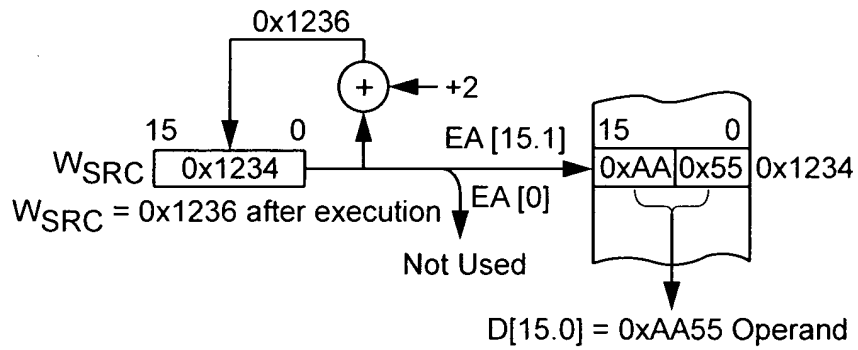


Figure 49

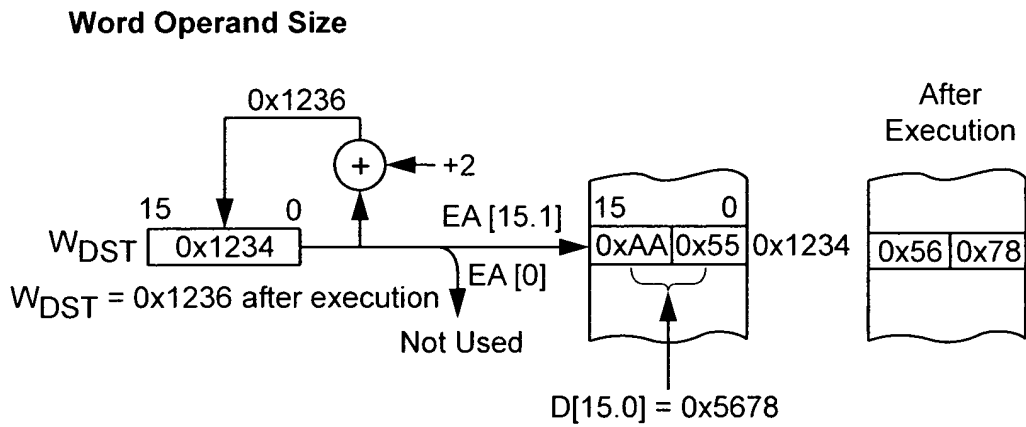
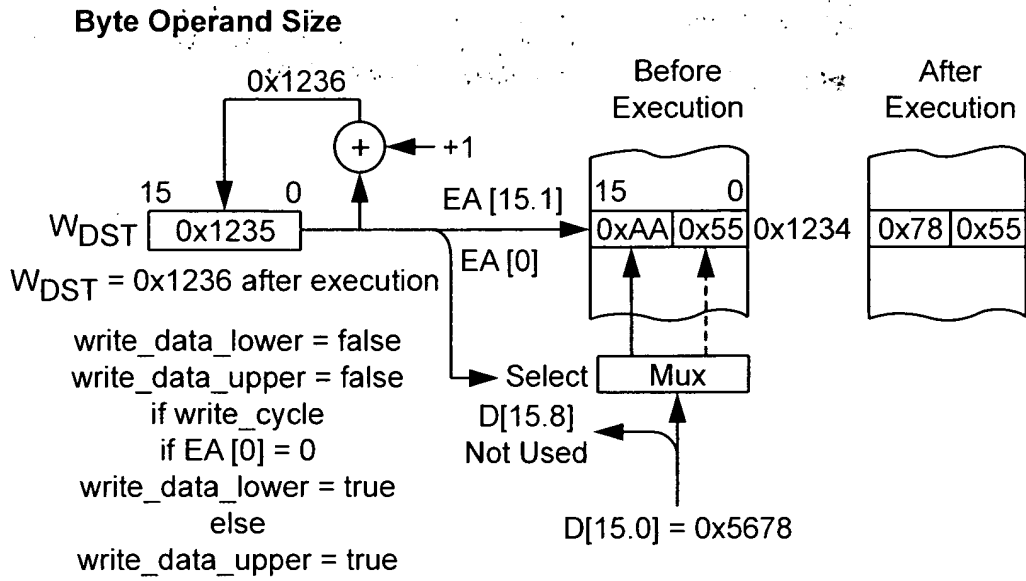
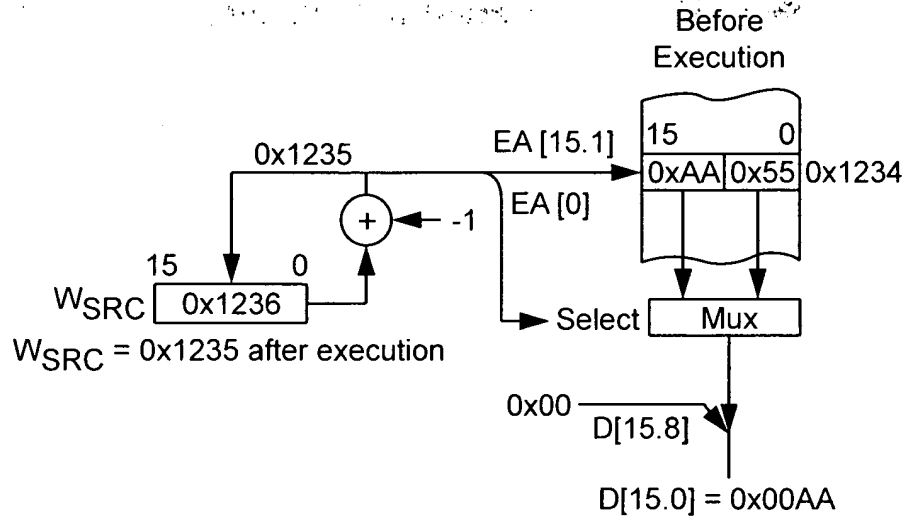
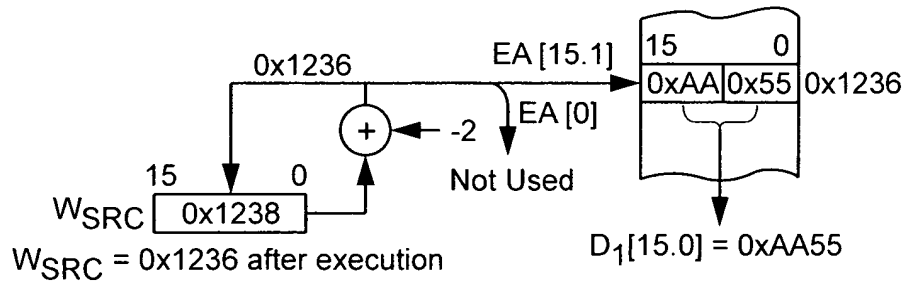
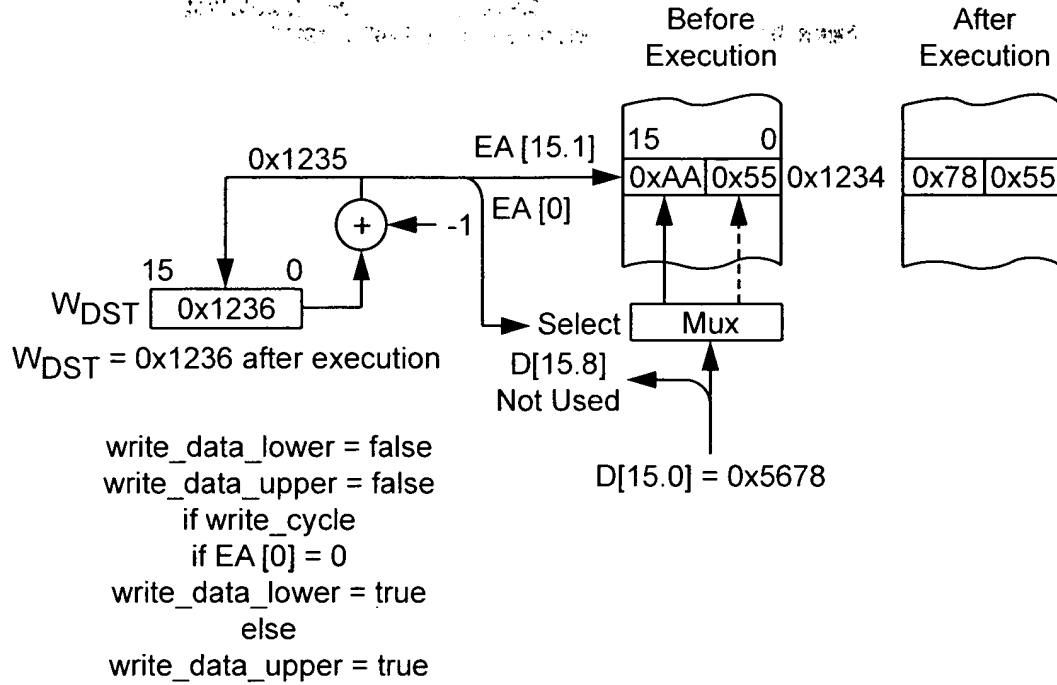


Figure 50

Byte Operand Size**Word Operand Size****Figure 51**

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Byte Operand Size



Word Operand Size

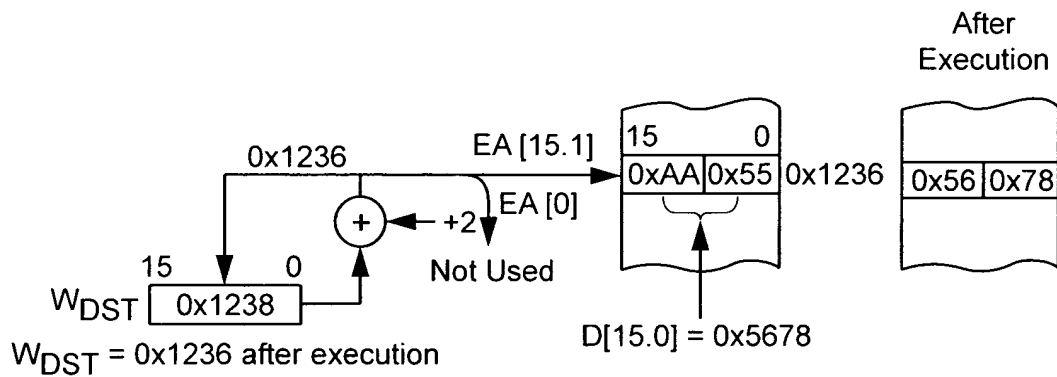
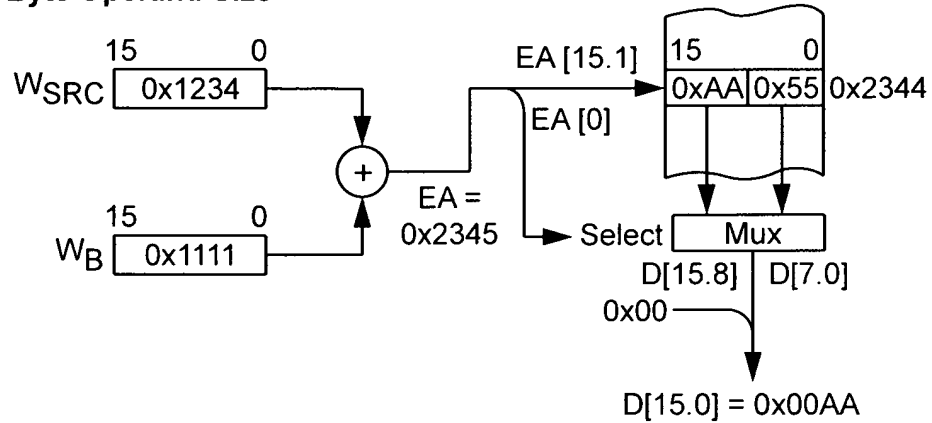
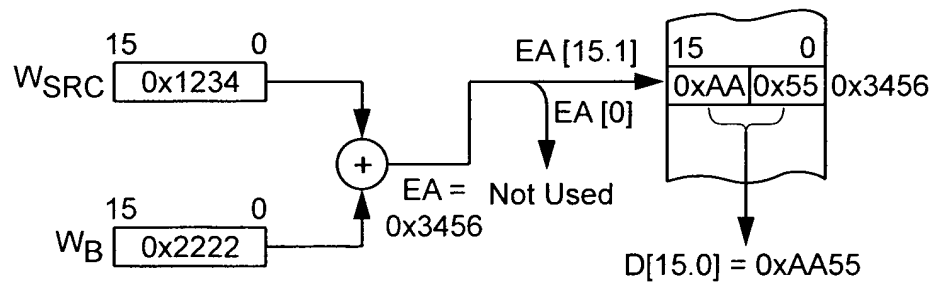


Figure 52

Byte Operand Size**Word Operand Size****Figure 53**

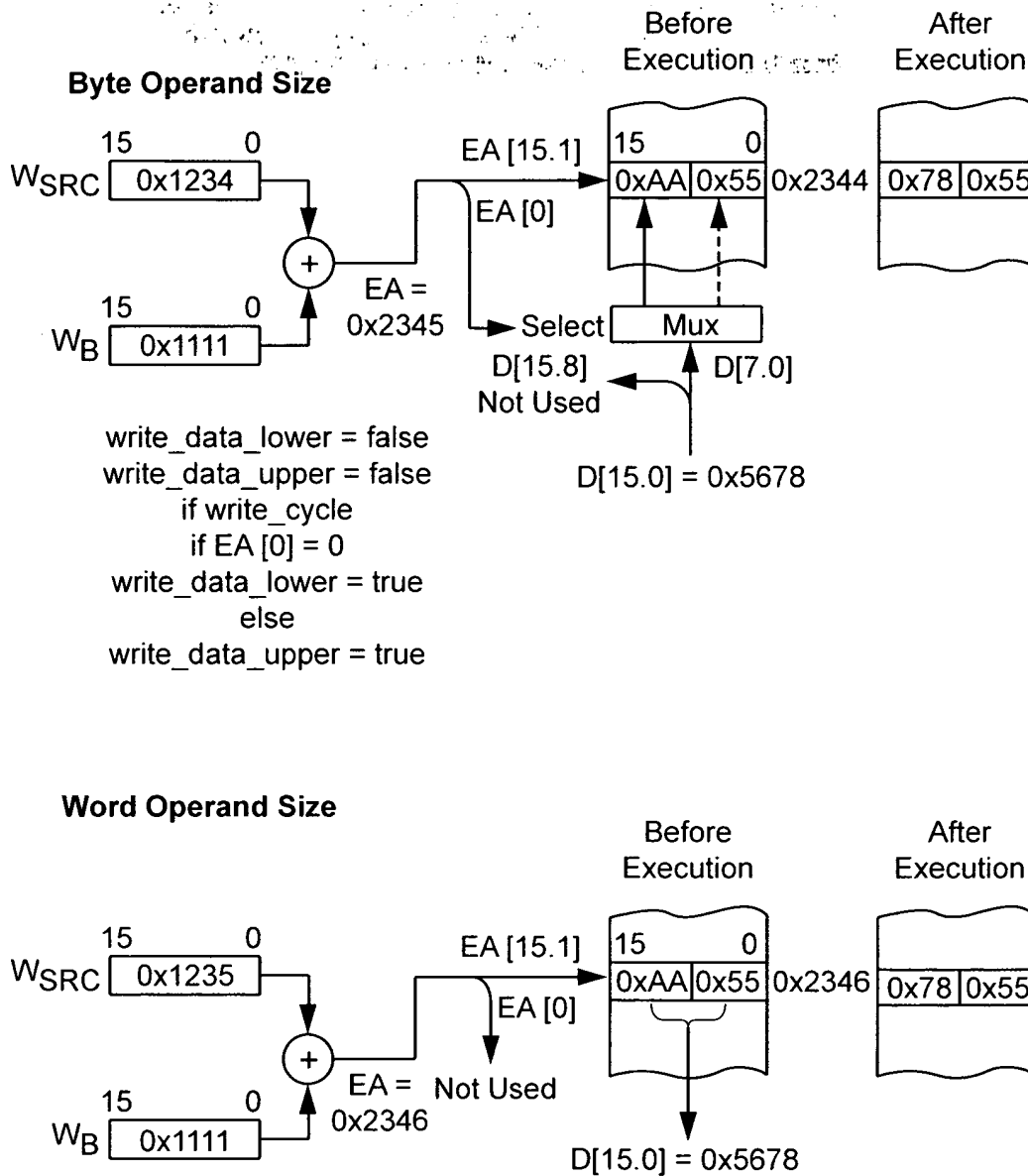
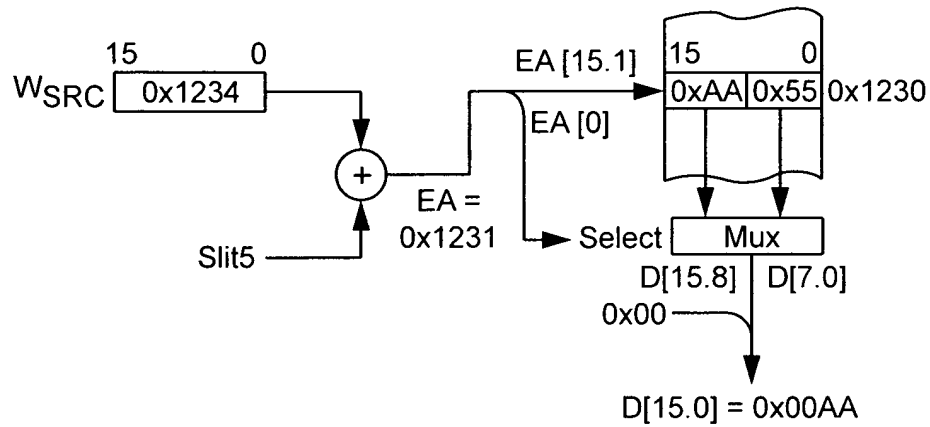


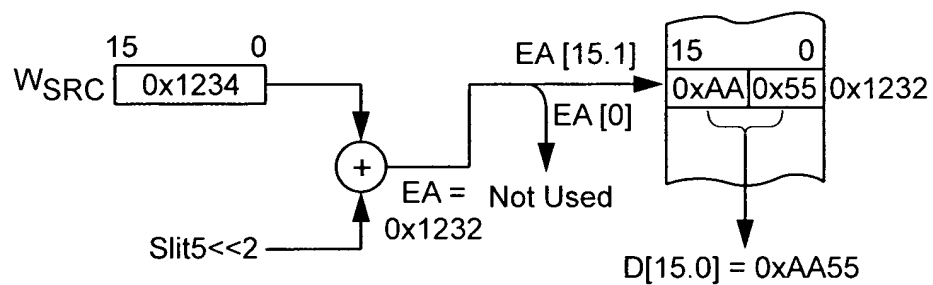
Figure 54

Byte Operand Size

Example Slit5 = -3

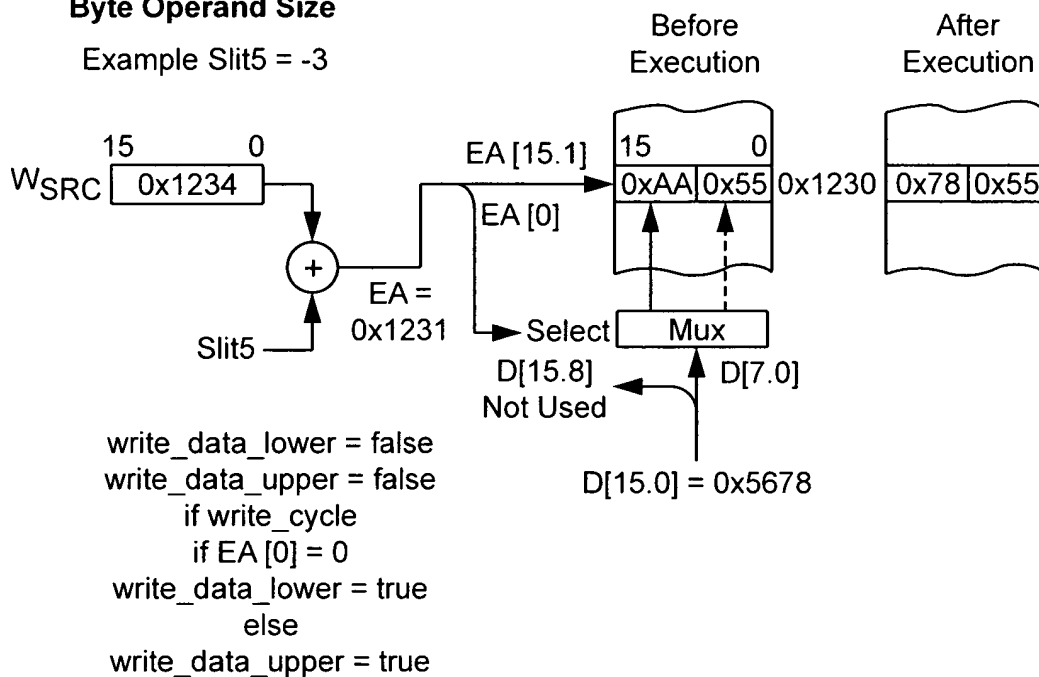
**Word Operand Size**

Example Slit5 = -1

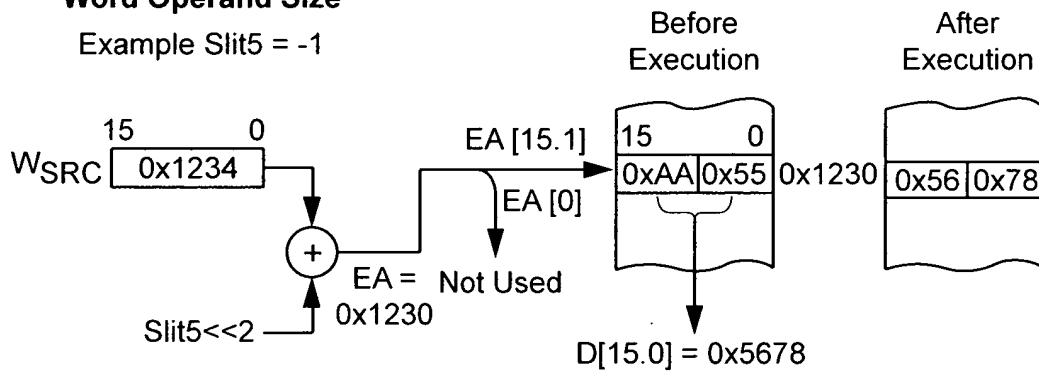
**Figure 55**

Byte Operand Size

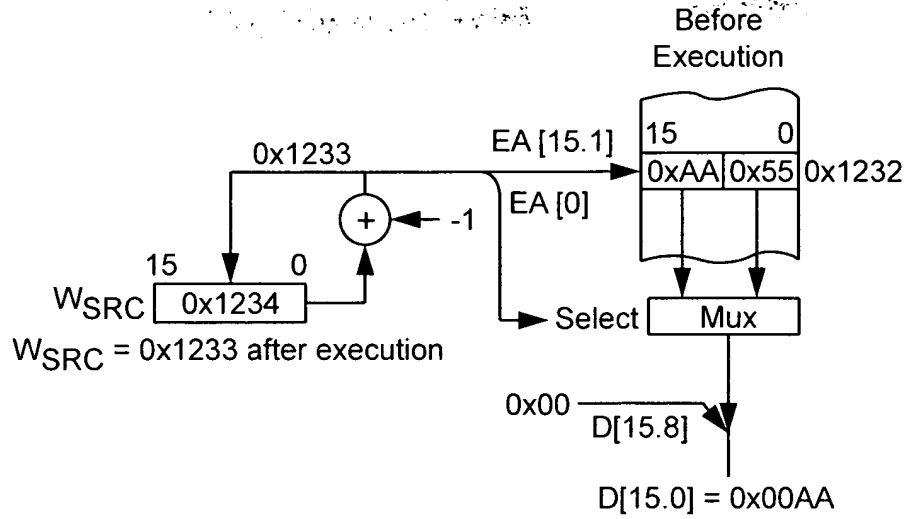
Example Slit5 = -3

**Word Operand Size**

Example Slit5 = -1

**Figure 56**

Byte Operand Size



Word Operand Size

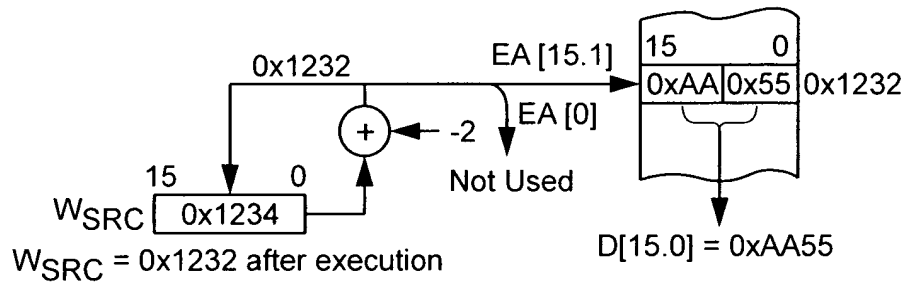
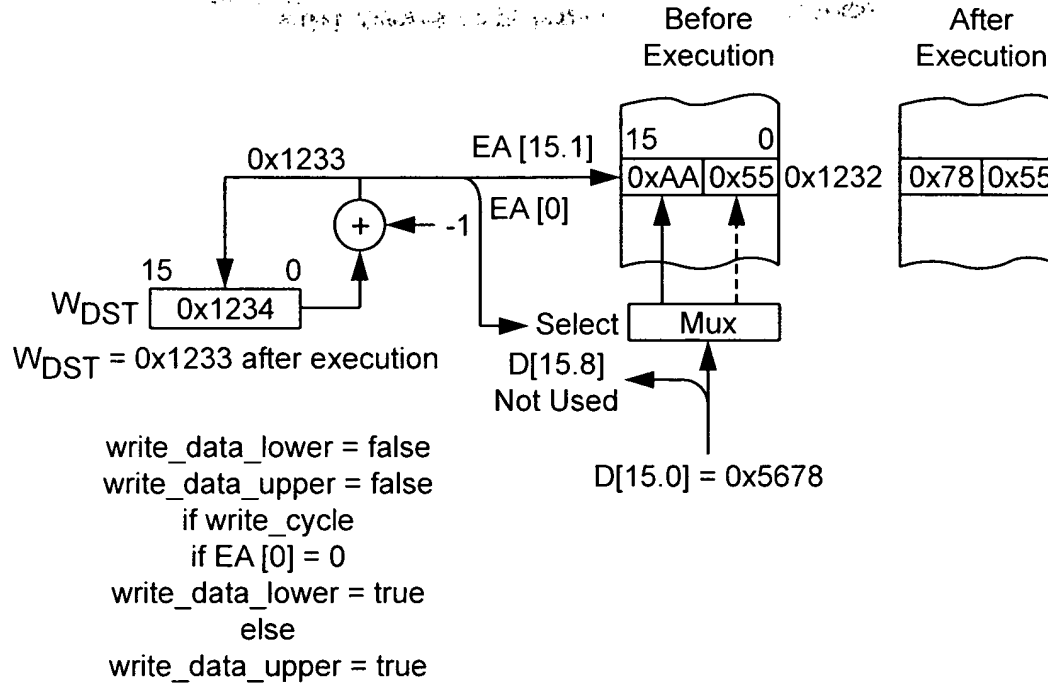


Figure 57

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Byte Operand Size



Word Operand Size

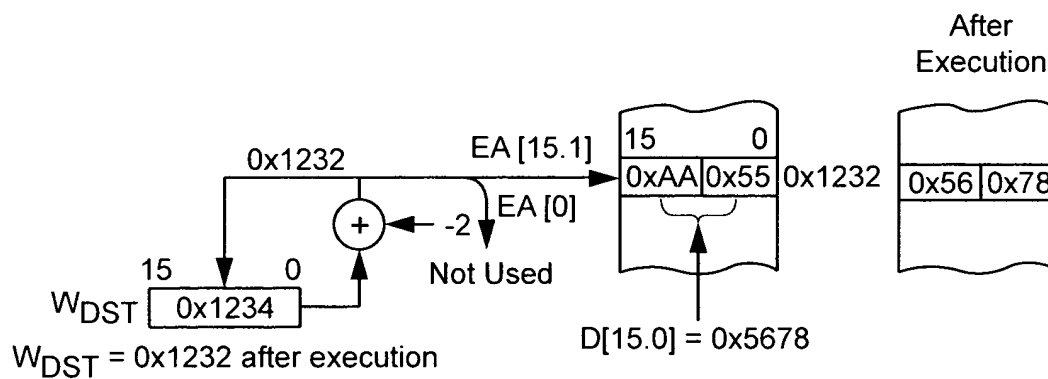
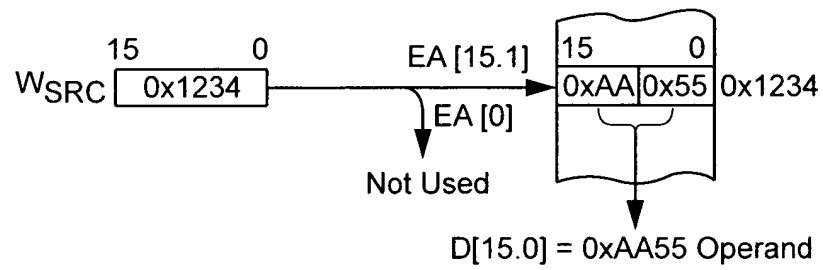
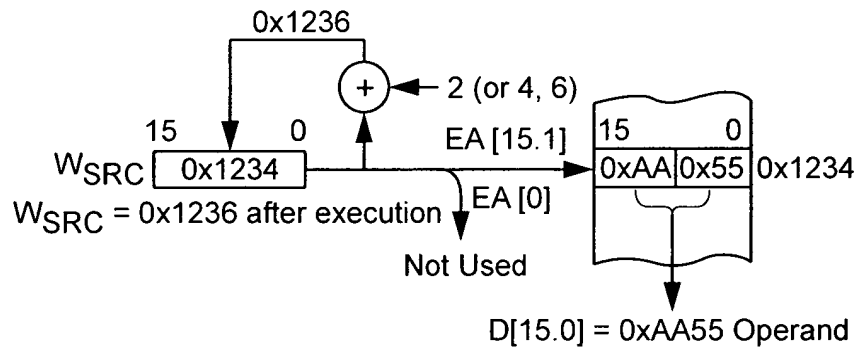


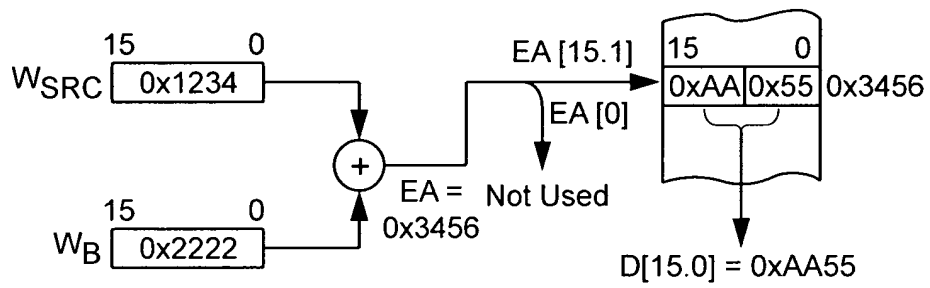
Figure 58

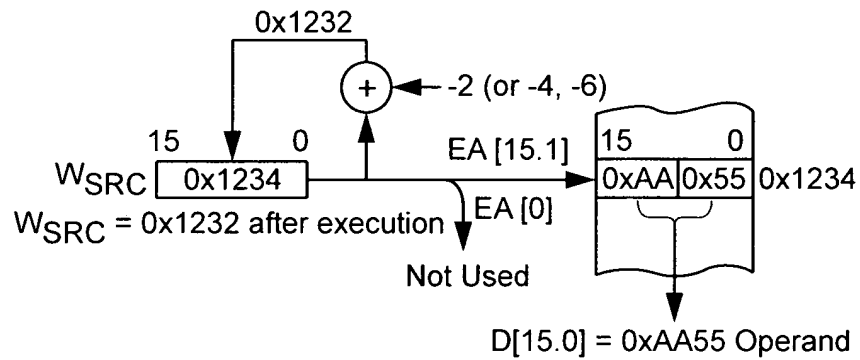
**Figure 59**

Word Operand Size

Example shown is post inc by 2

Figure 60

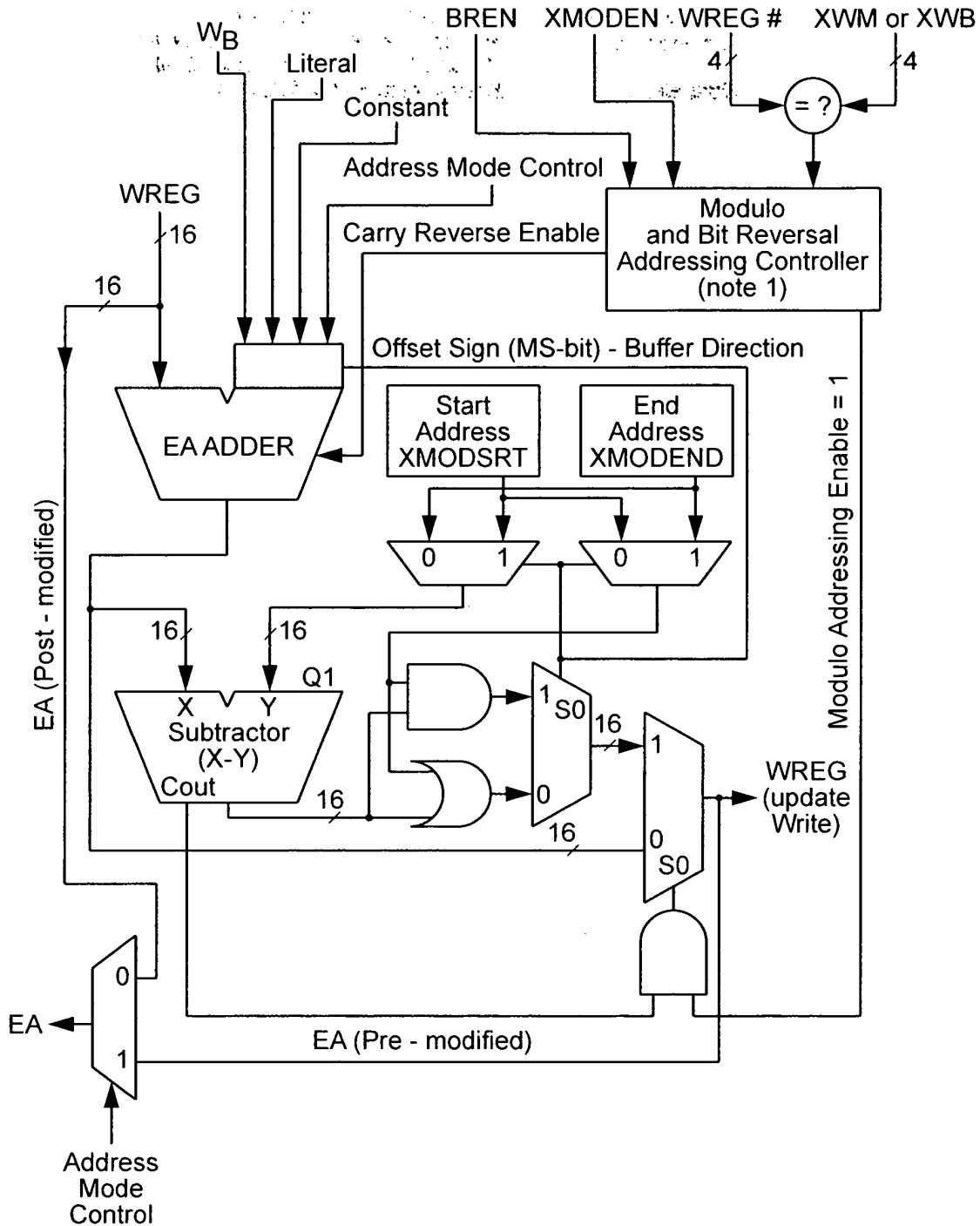
Word Operand Size**Figure 61**

Word Operand Size

Example shown is post dec by 2

Figure 62

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Note 1: Register check may be performed during Q4 of prior cycle

Figure 63

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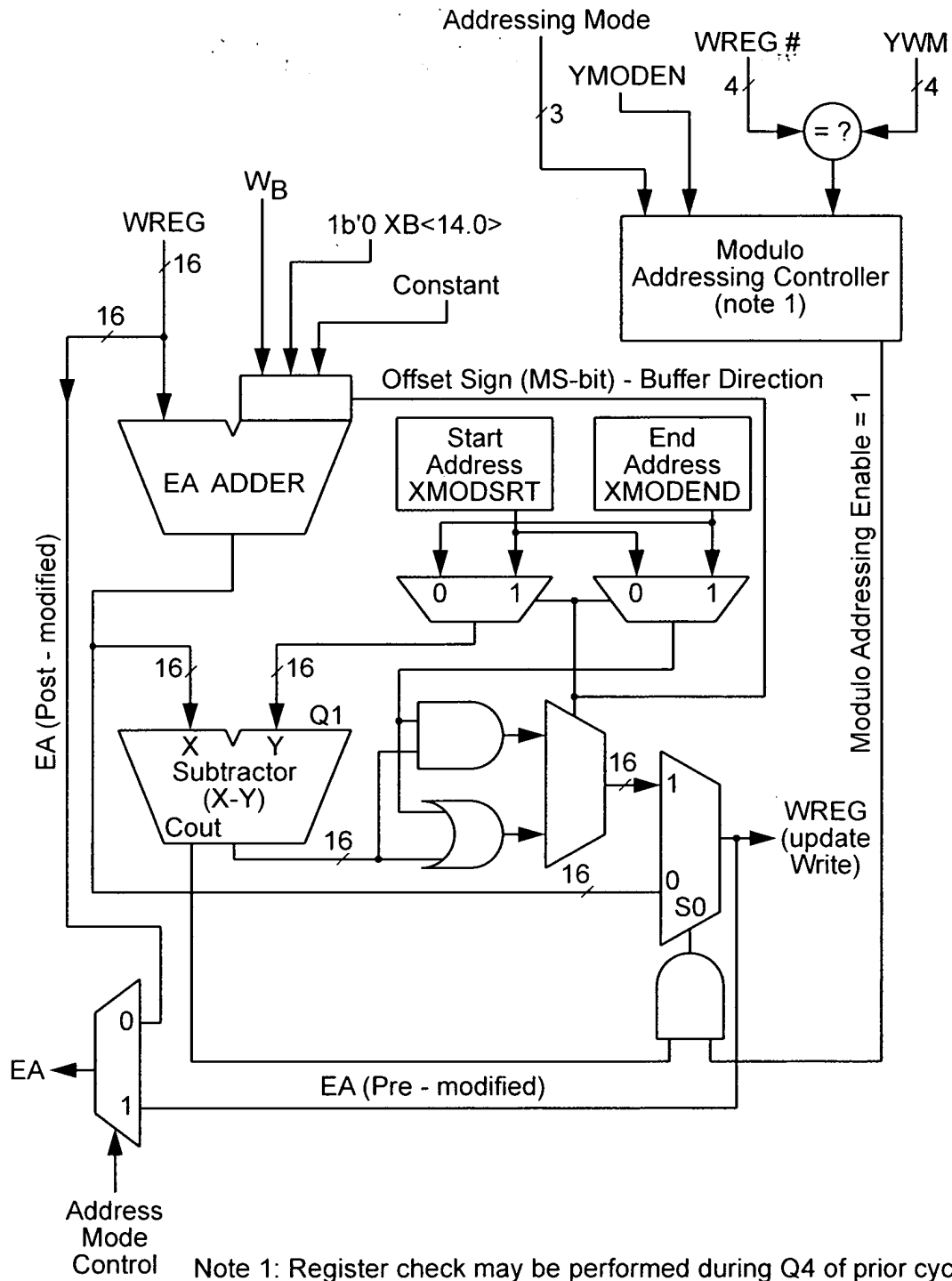


Figure 64

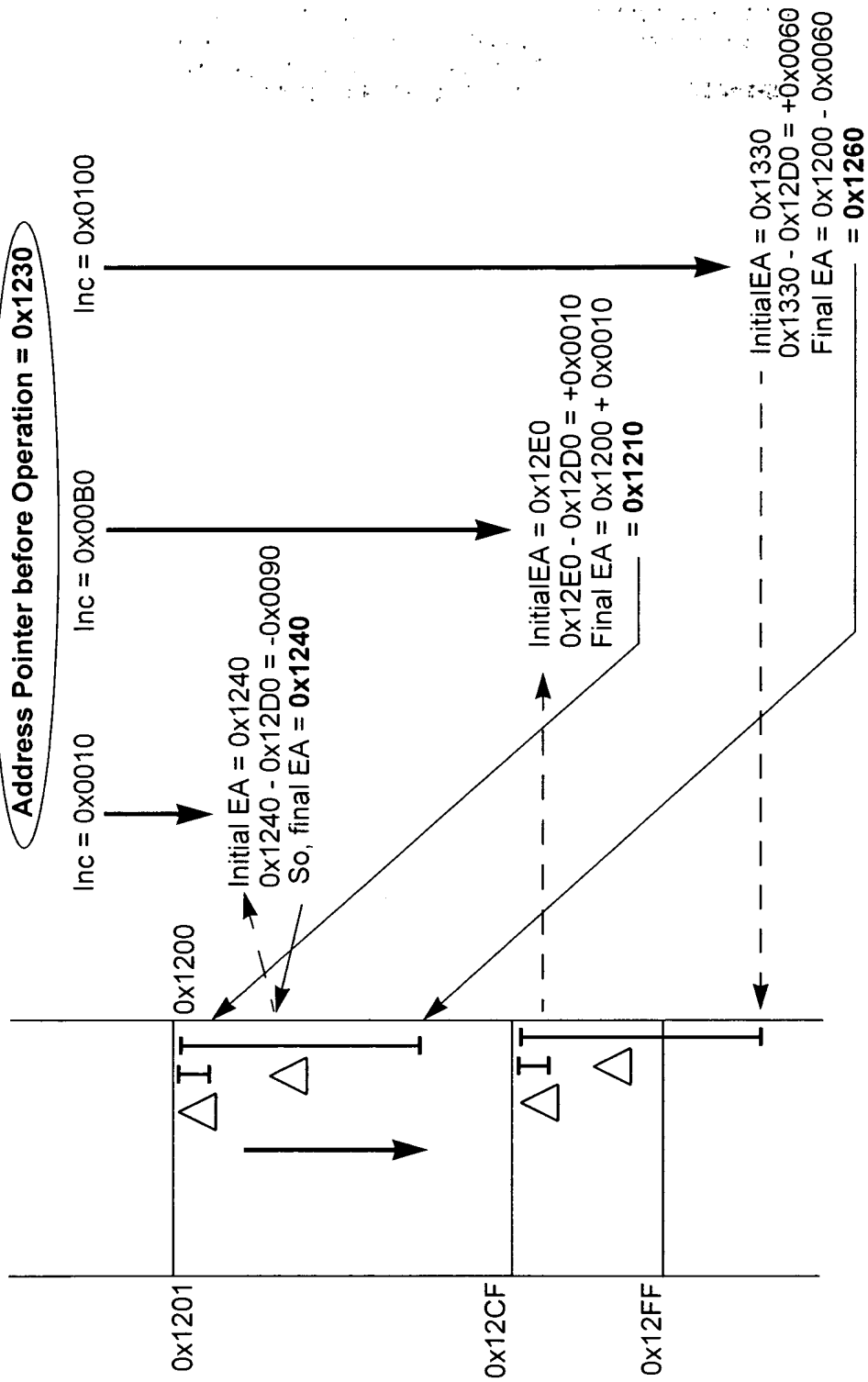


Figure 65

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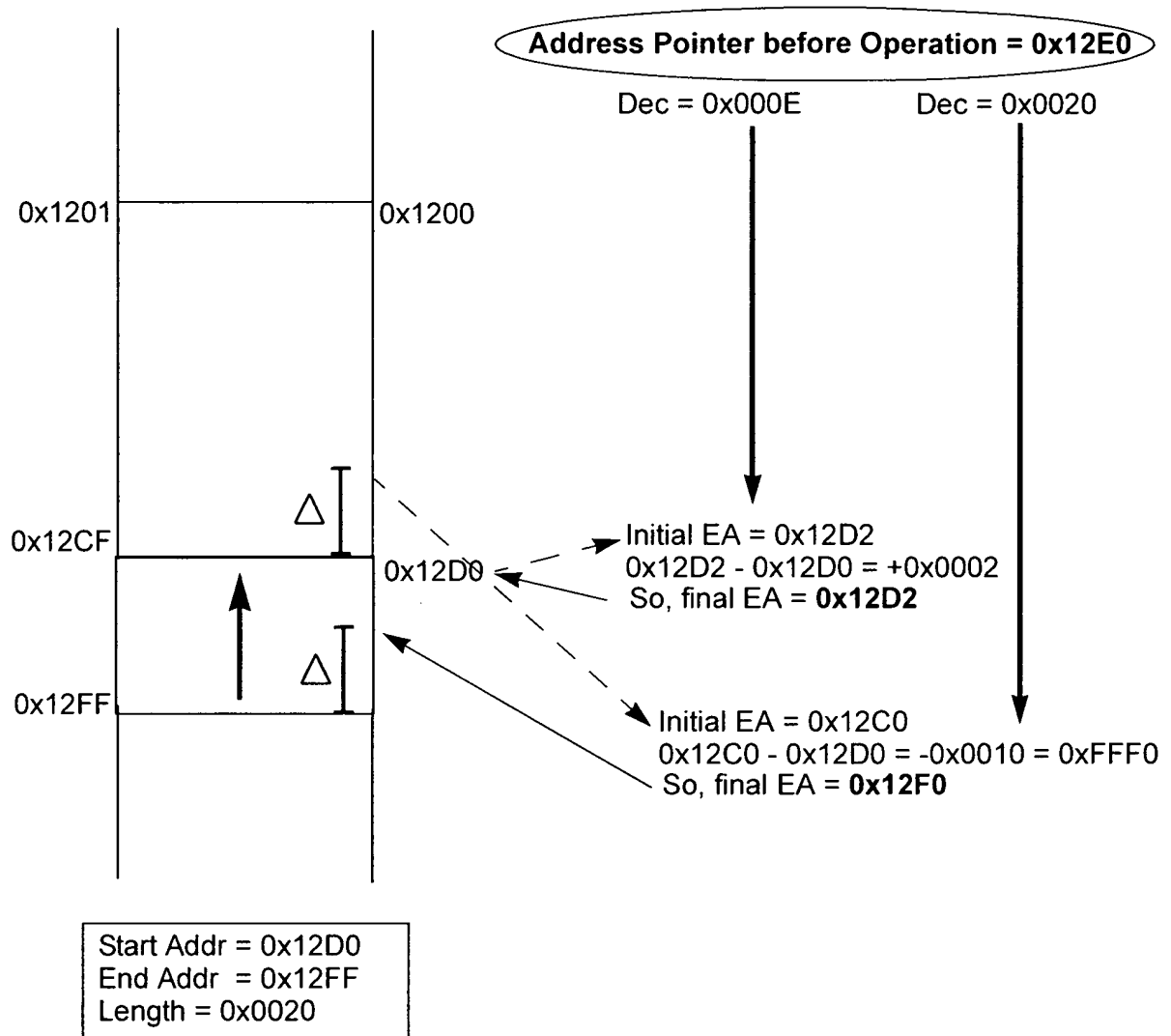


Figure 66

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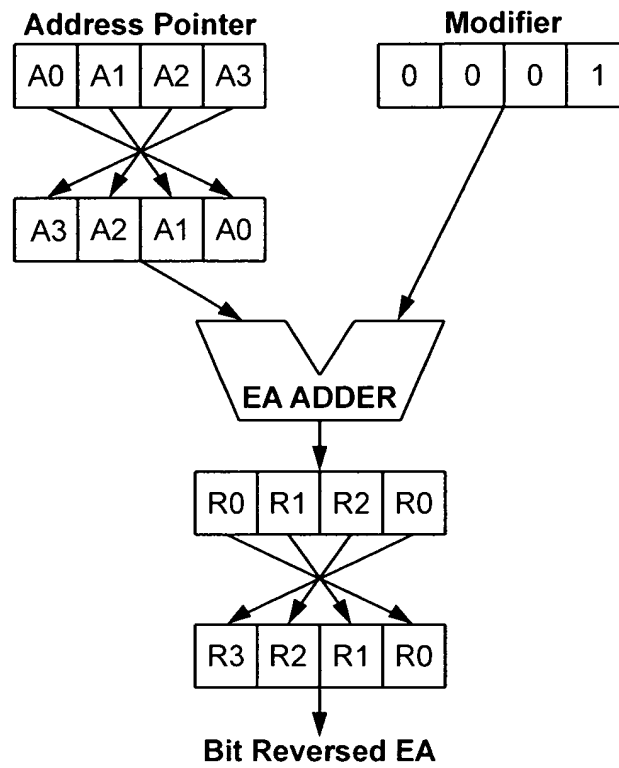
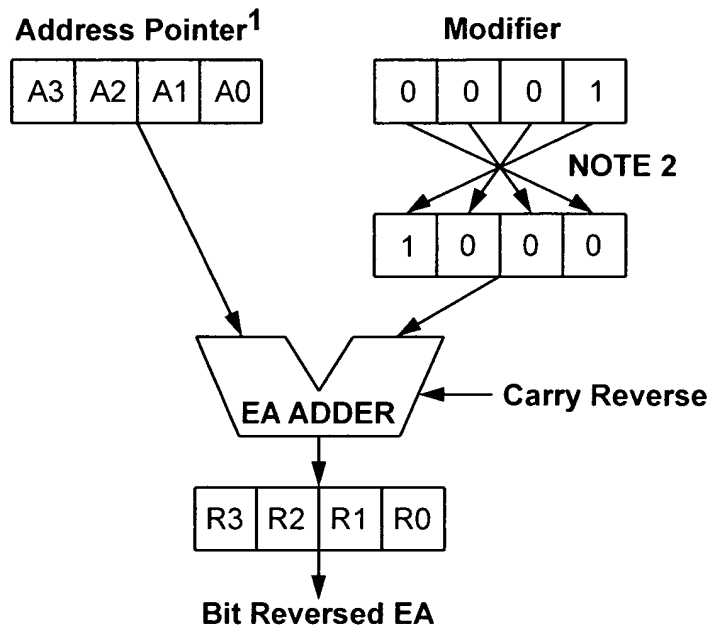


Figure 67

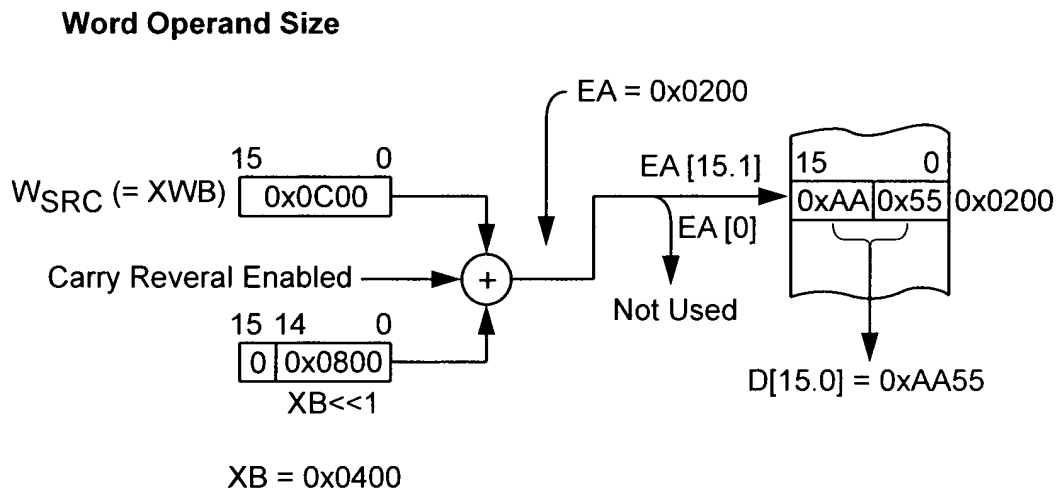
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NOTE 1: Addr pointer contents assumed reversed

NOTE 2: Reversed modifiers may be created and stored as constants

Figure 68

**Figure 69**

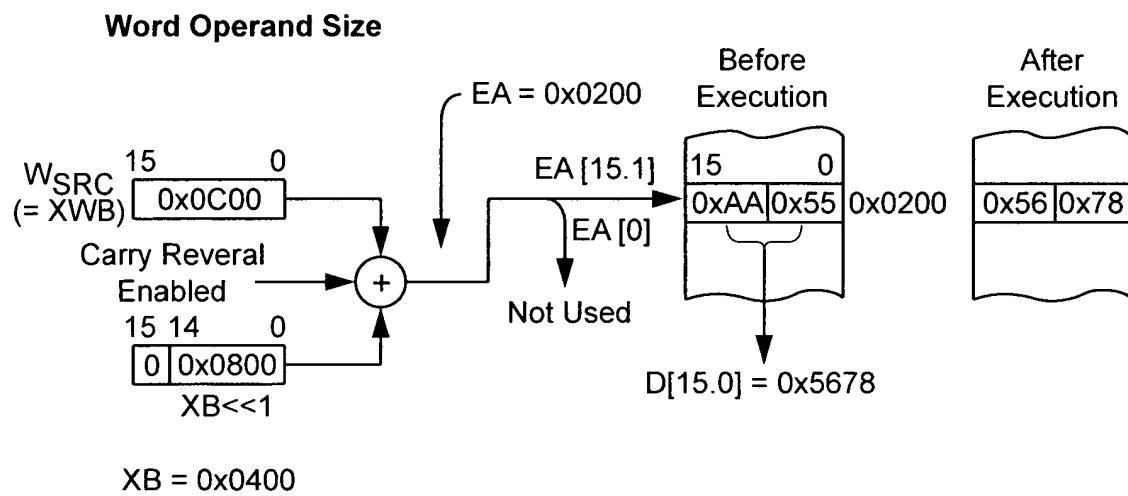
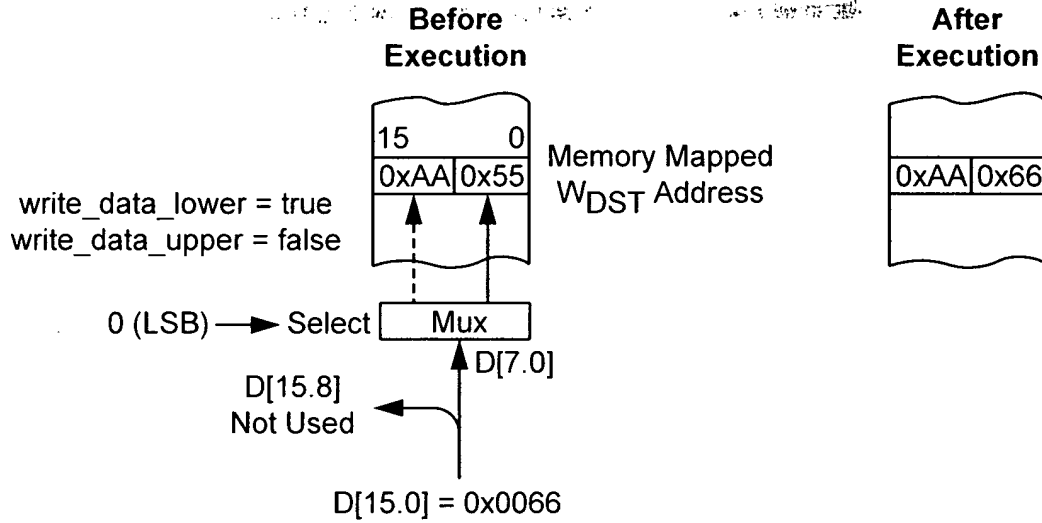


Figure 70

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Byte Operand Size



Word Operand Size

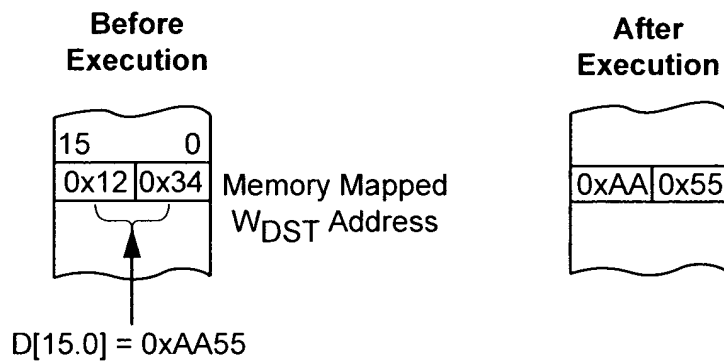
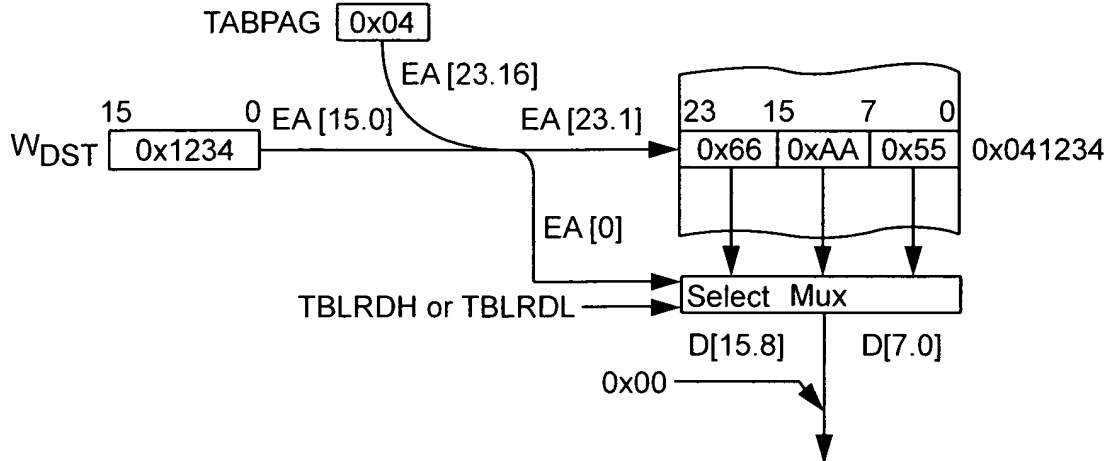


Figure 71

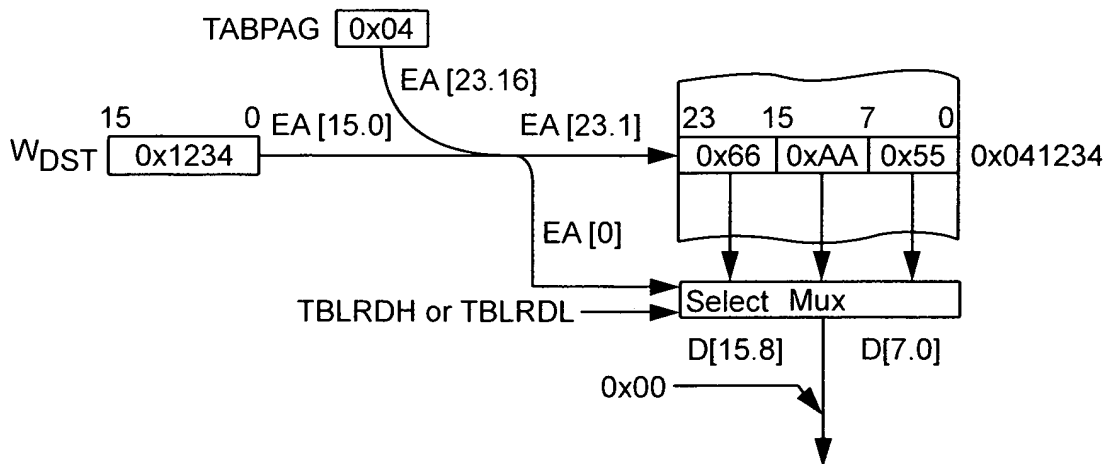
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Byte Operand Size



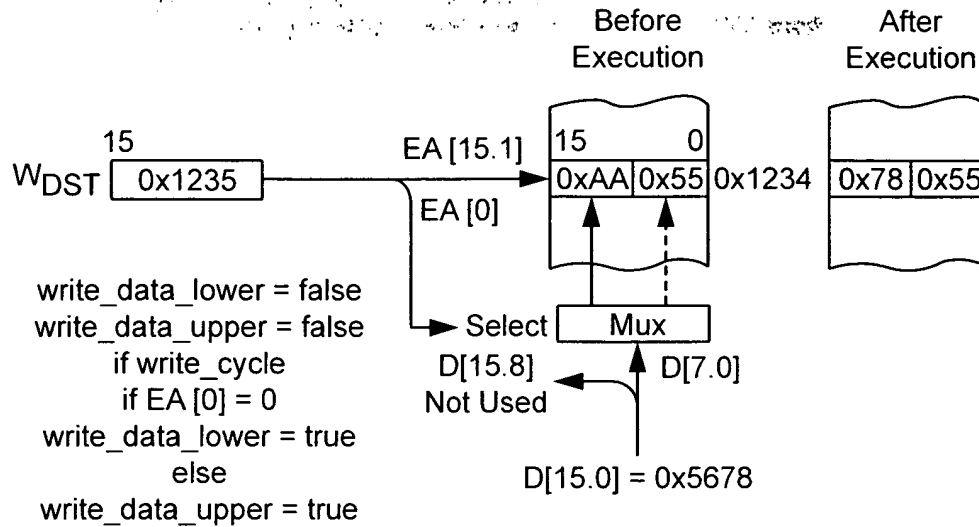
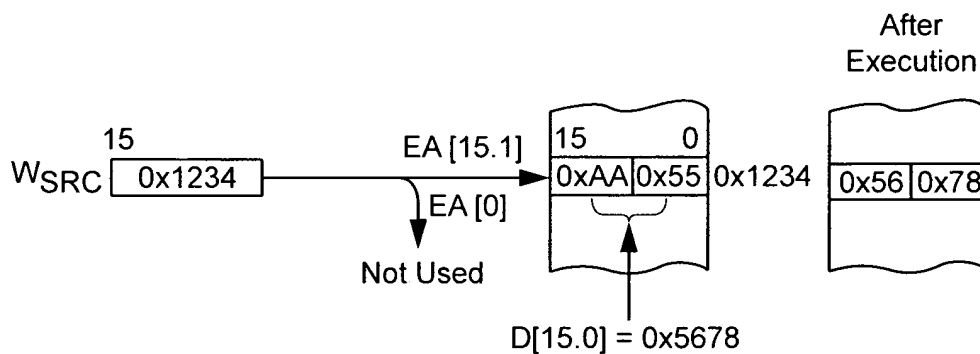
TBLRDL b (EA[0] = 1) D[15.0] = 0x00AA TBLRDL b (EA[0] = 0) D[15.0] = 0x0055
 TBLRDH b (EA[0] = 1) D[15.0] = 0x0000 TBLRDH b (EA[0] = 0) D[15.0] = 0x0066

Word Operand Size



TBLRDL.w : D[15.0] = 0xAA55
 TBLRDH.w : D[15.0] = 0x0066

Figure 72

Byte Operand Size**Word Operand Size****Figure 73**

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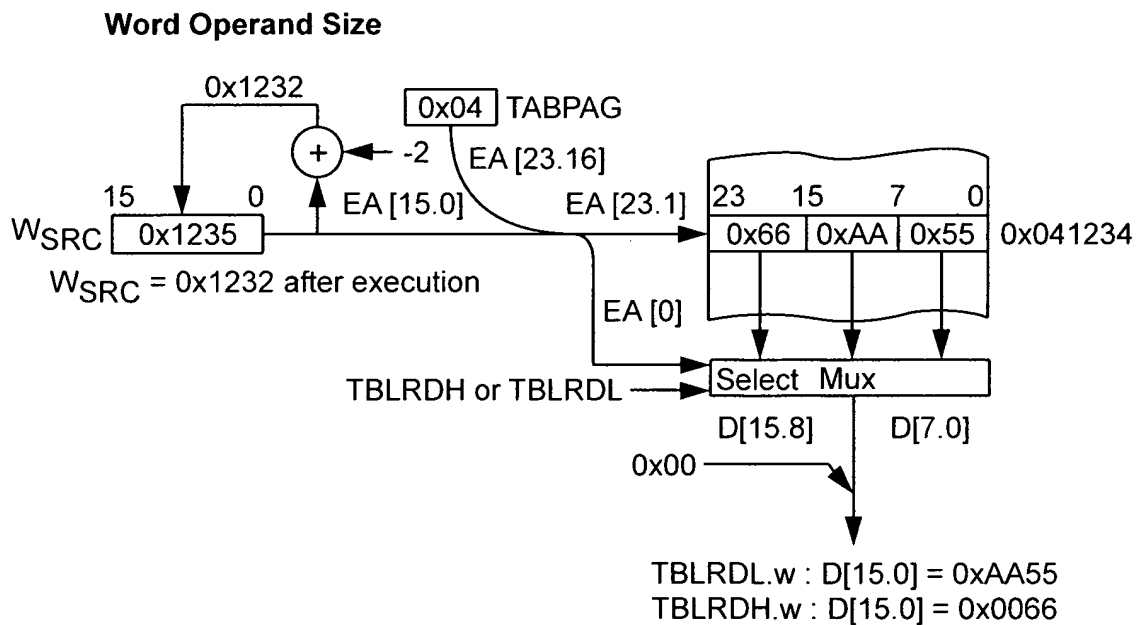
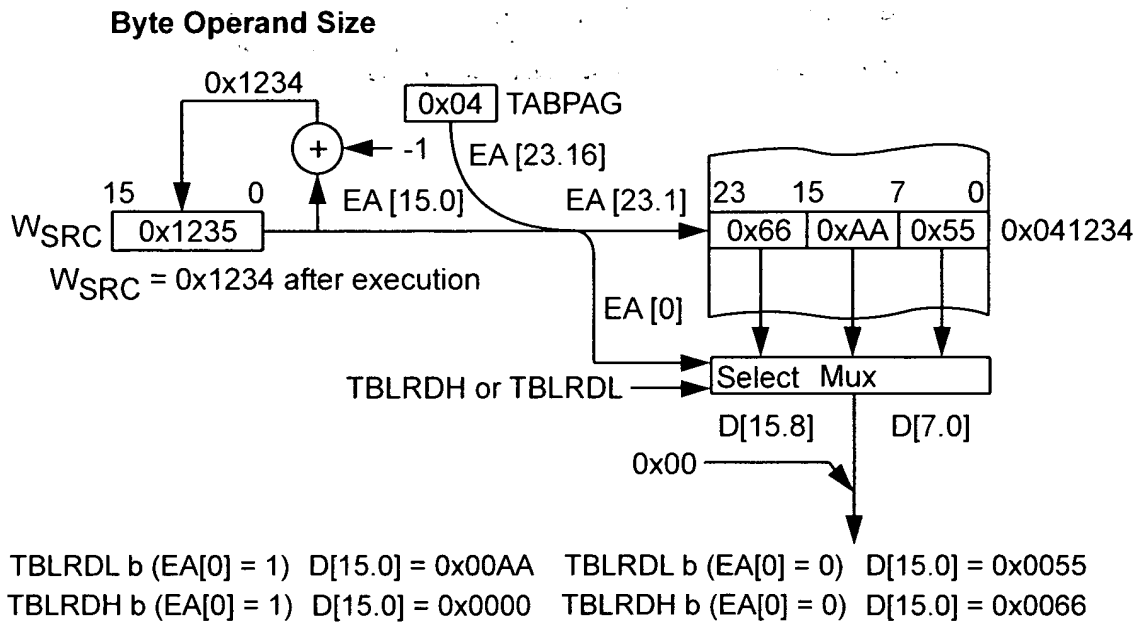


Figure 74

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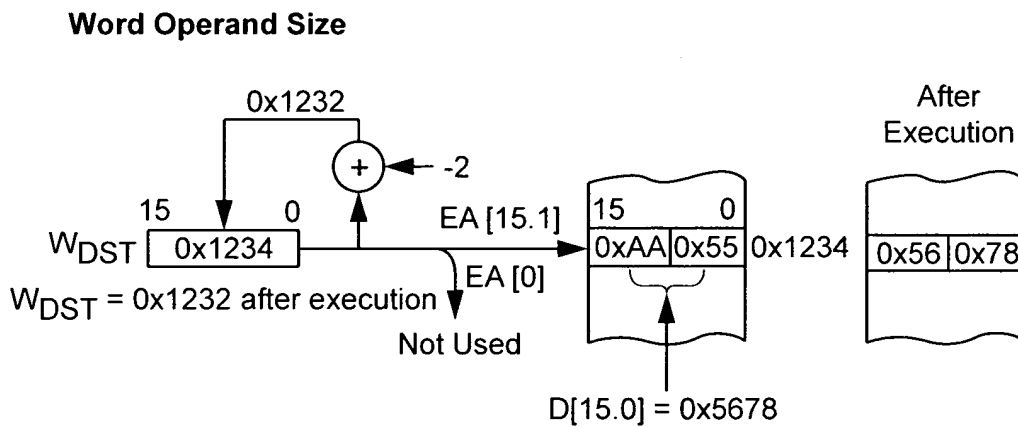
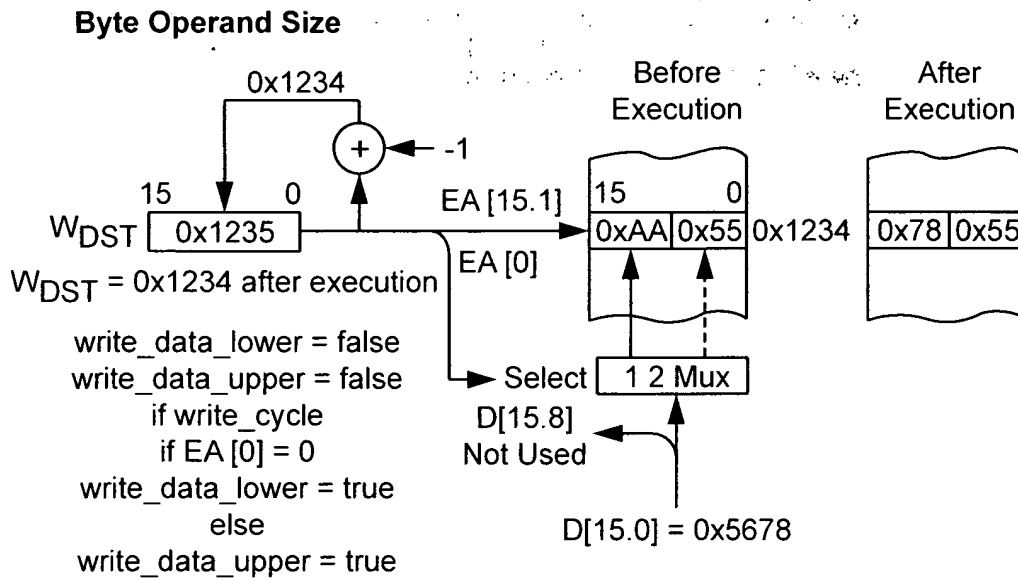


Figure 75

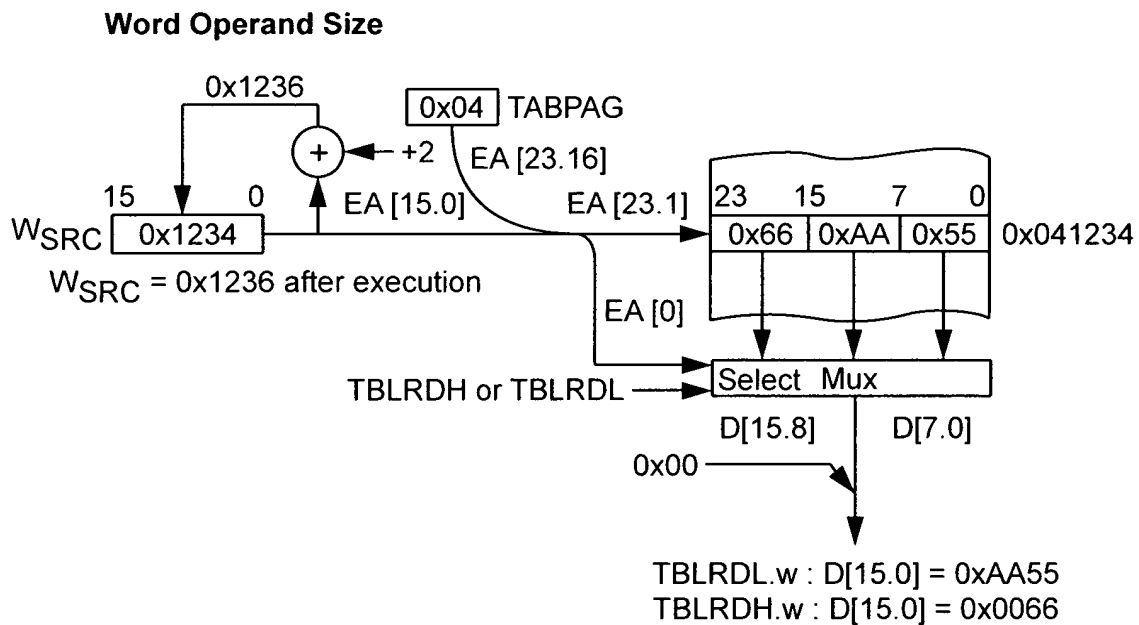
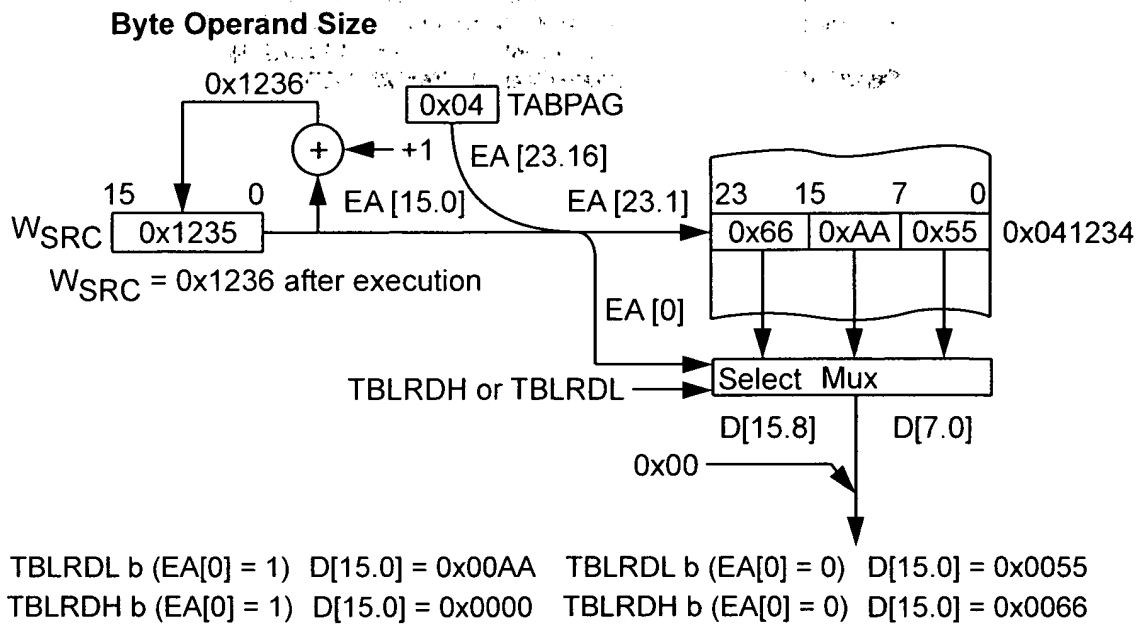
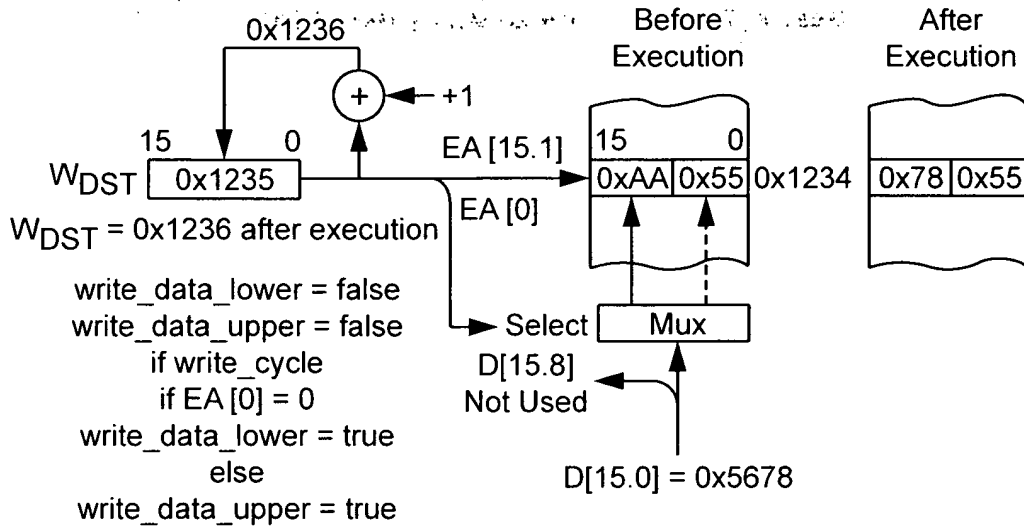


Figure 76

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Byte Operand Size



Word Operand Size

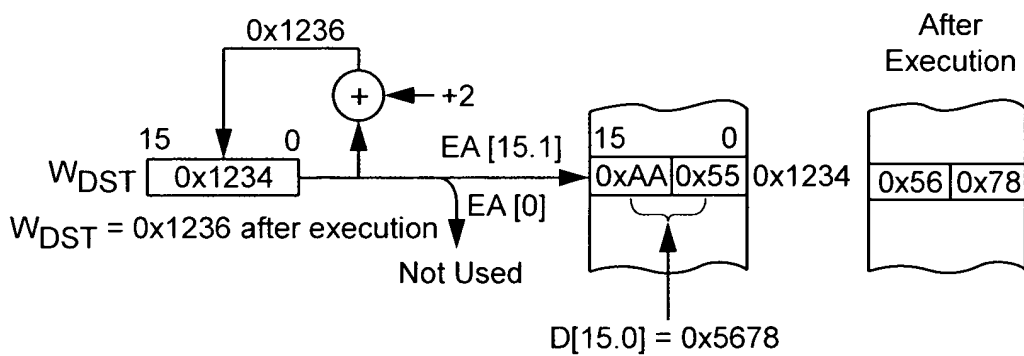
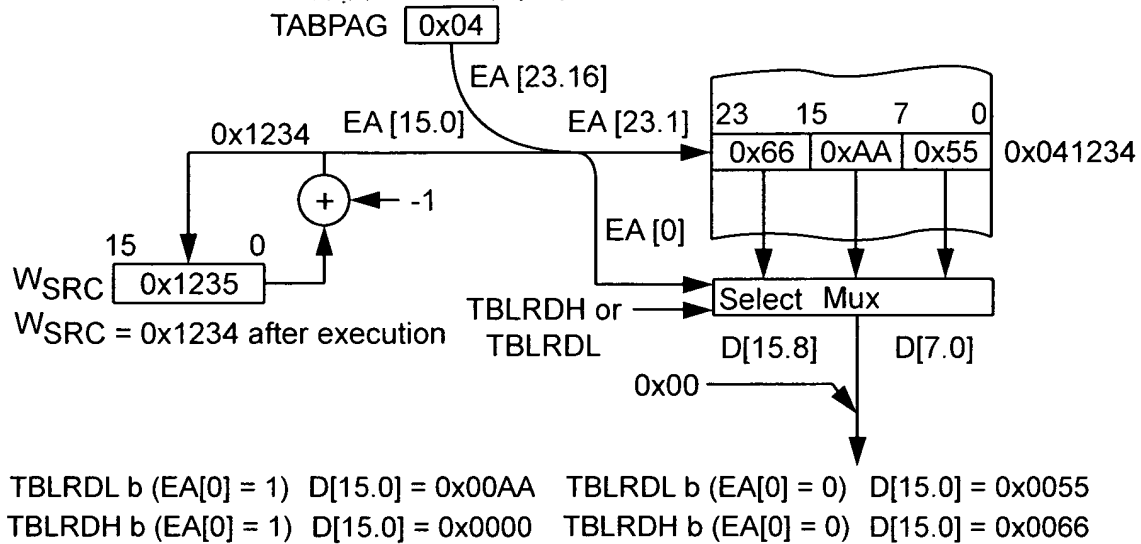


Figure 77



Word Operand Size

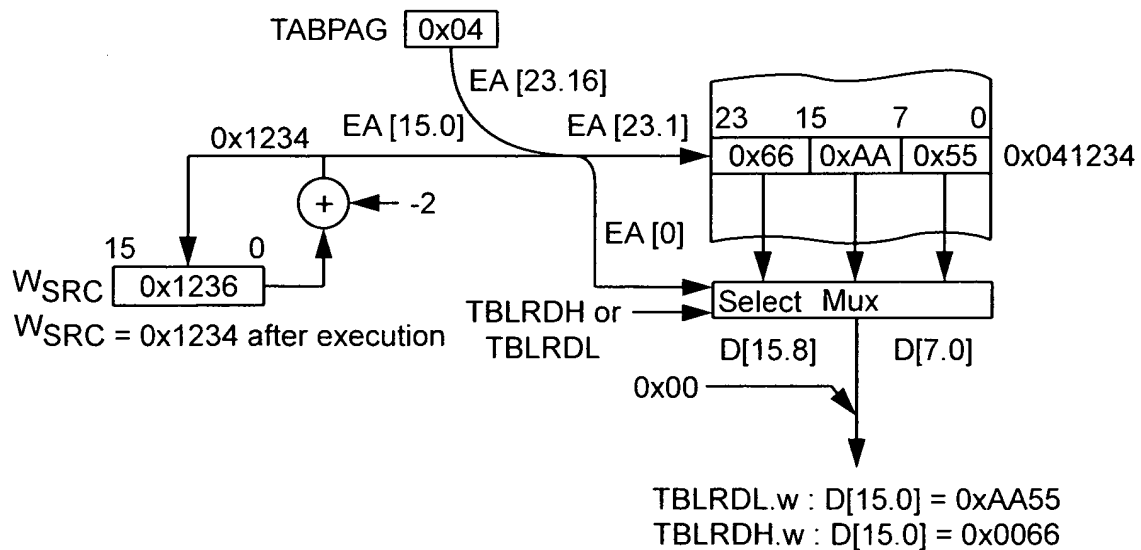
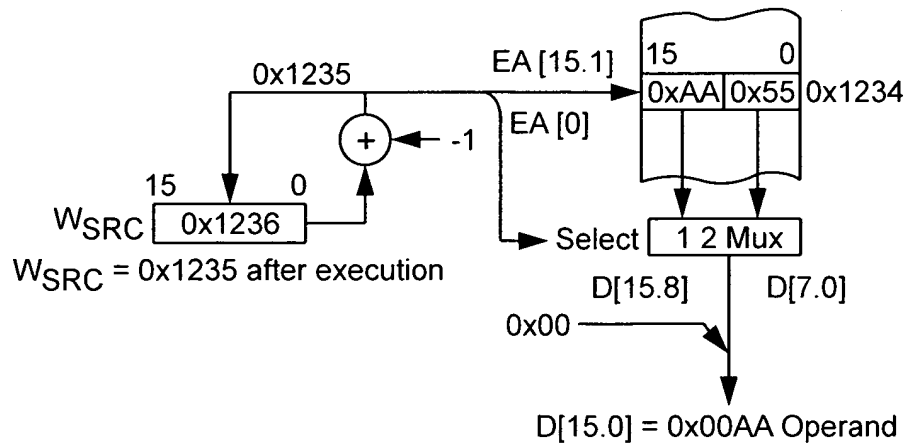


Figure 78

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Byte Operand Size



Word Operand Size

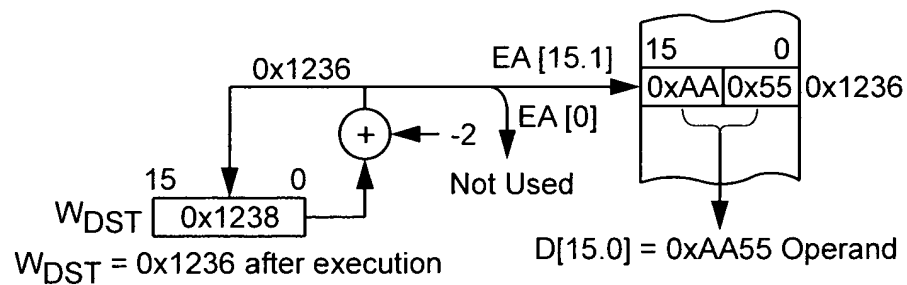
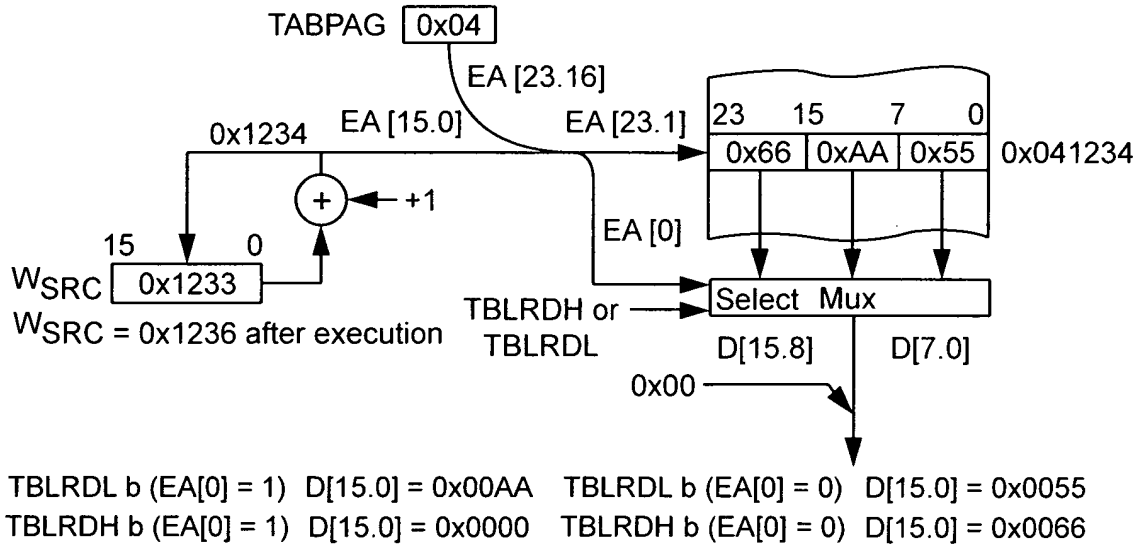


Figure 79

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Byte Operand Size



Word Operand Size

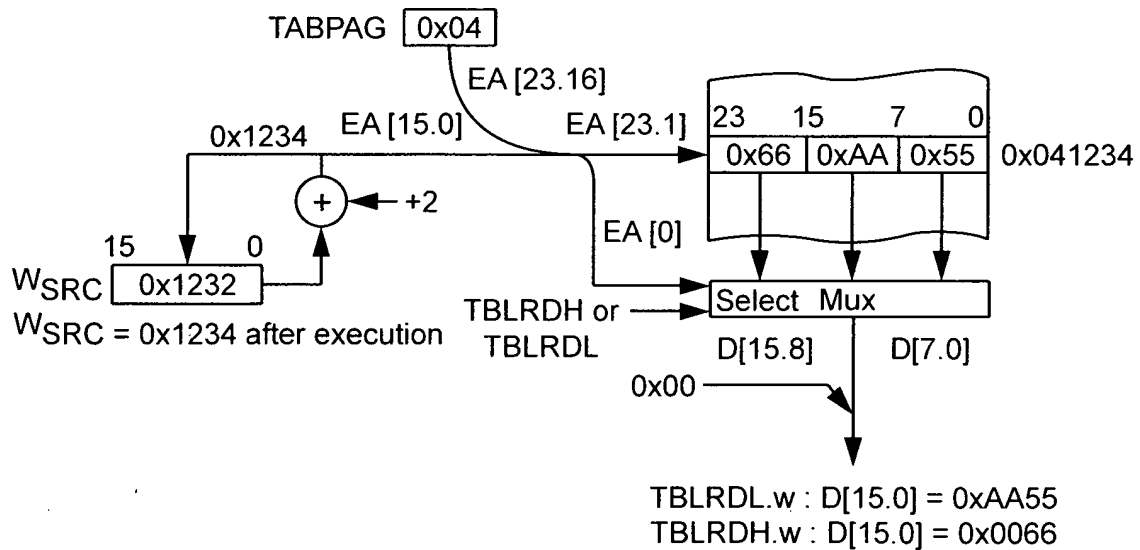
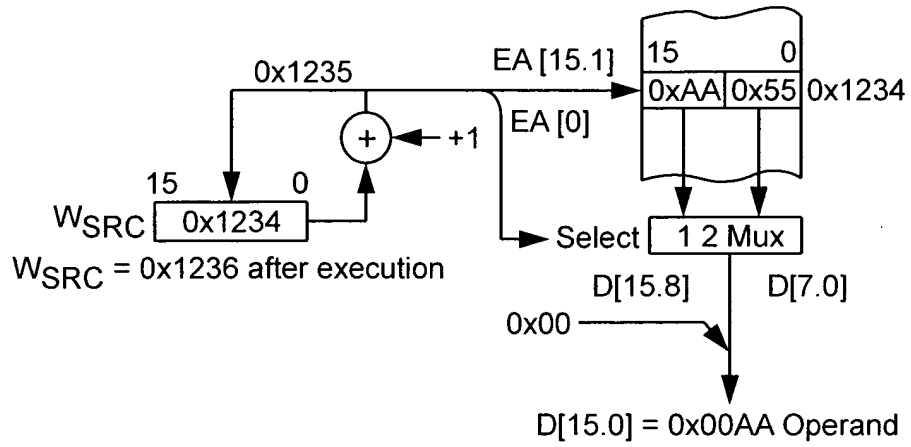


Figure 80

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Byte Operand Size



Word Operand Size

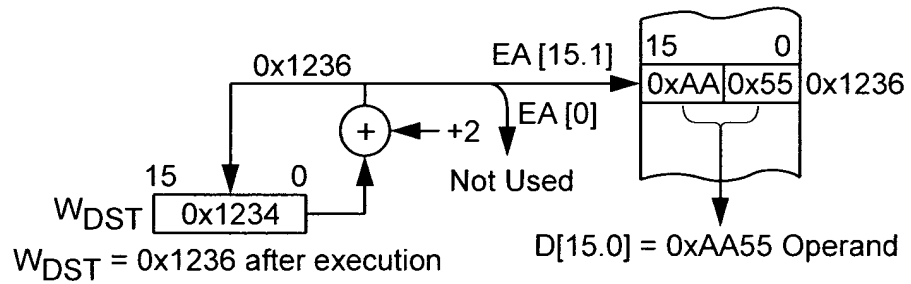


Figure 81

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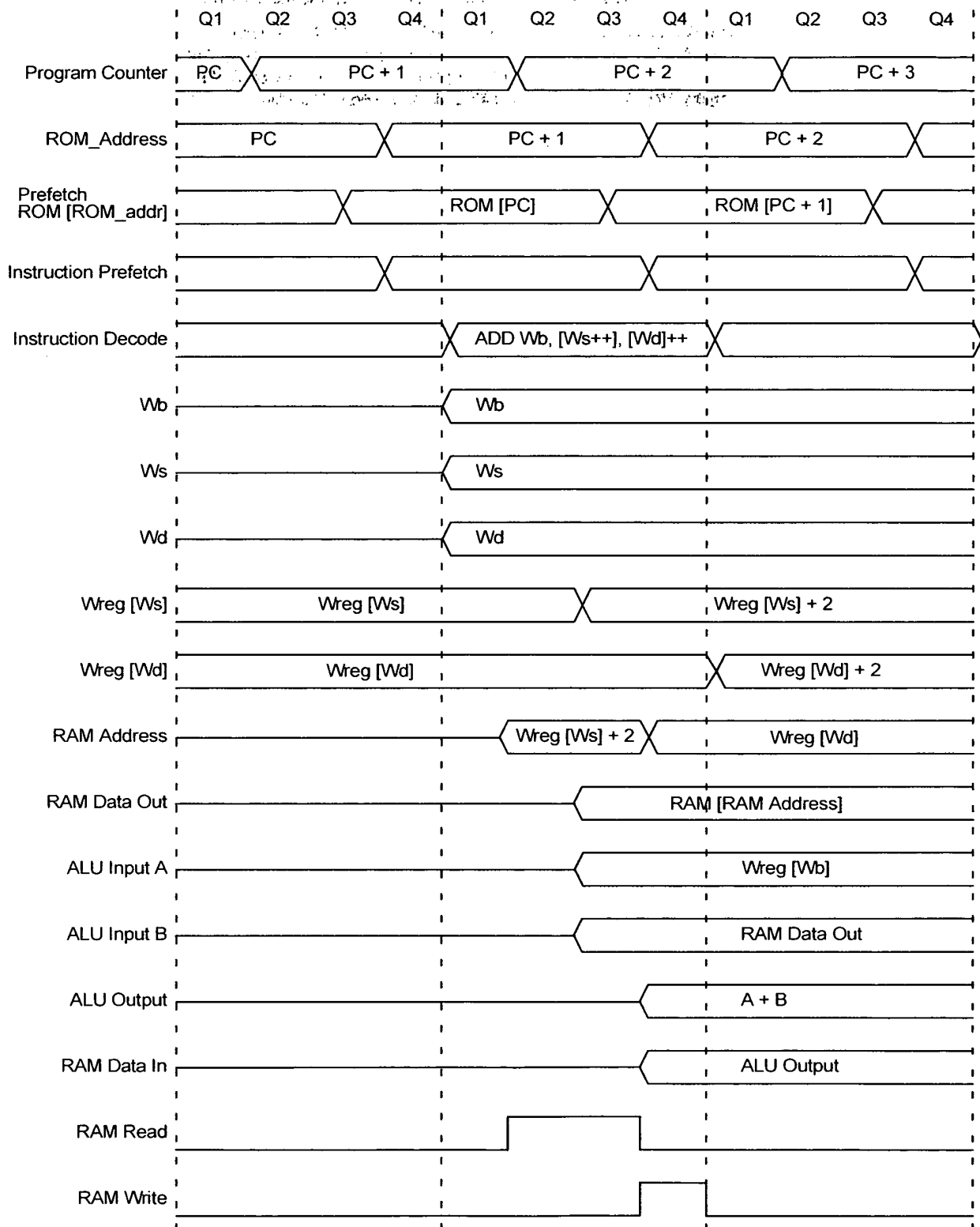
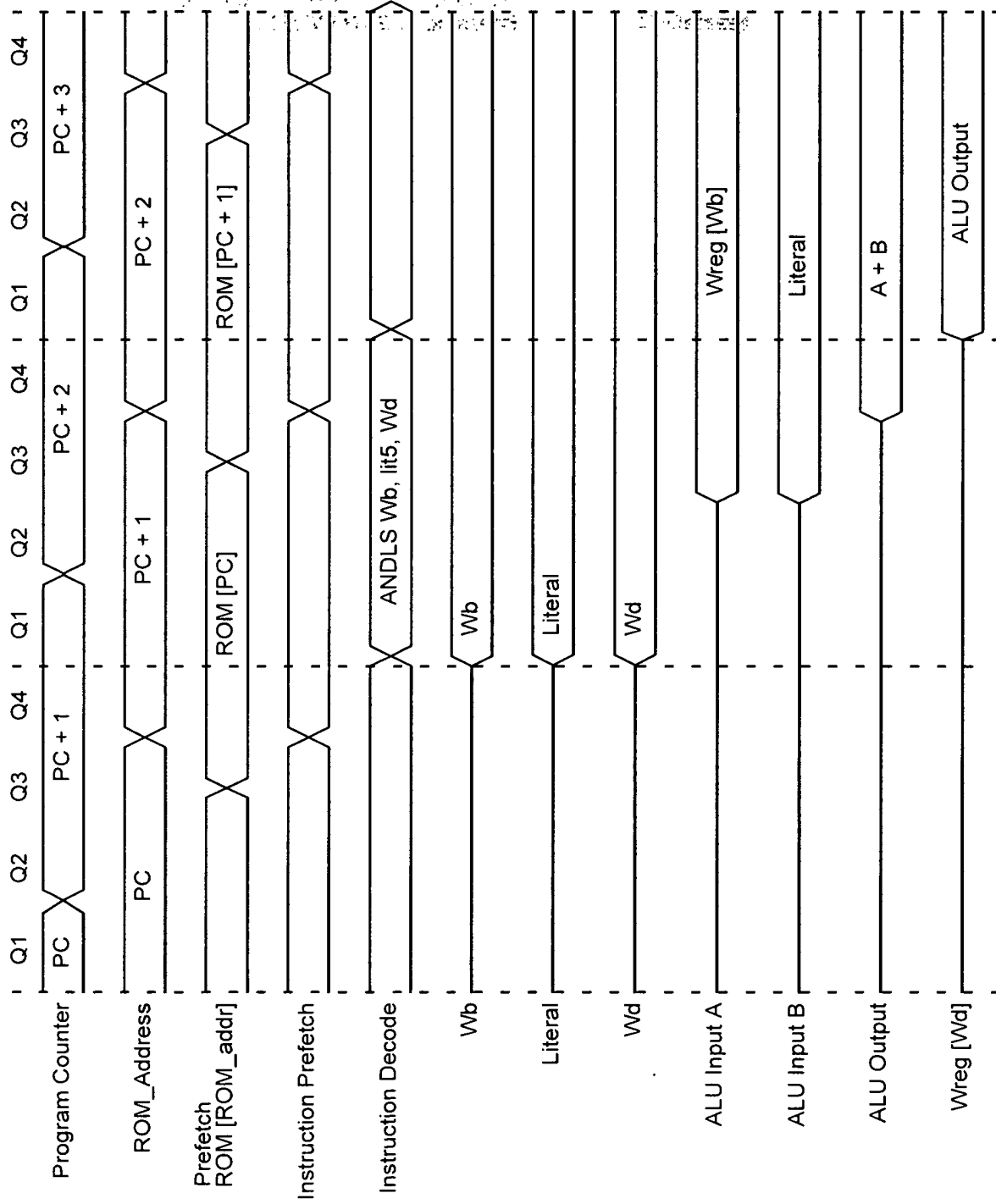


Figure 82

**Figure 83**

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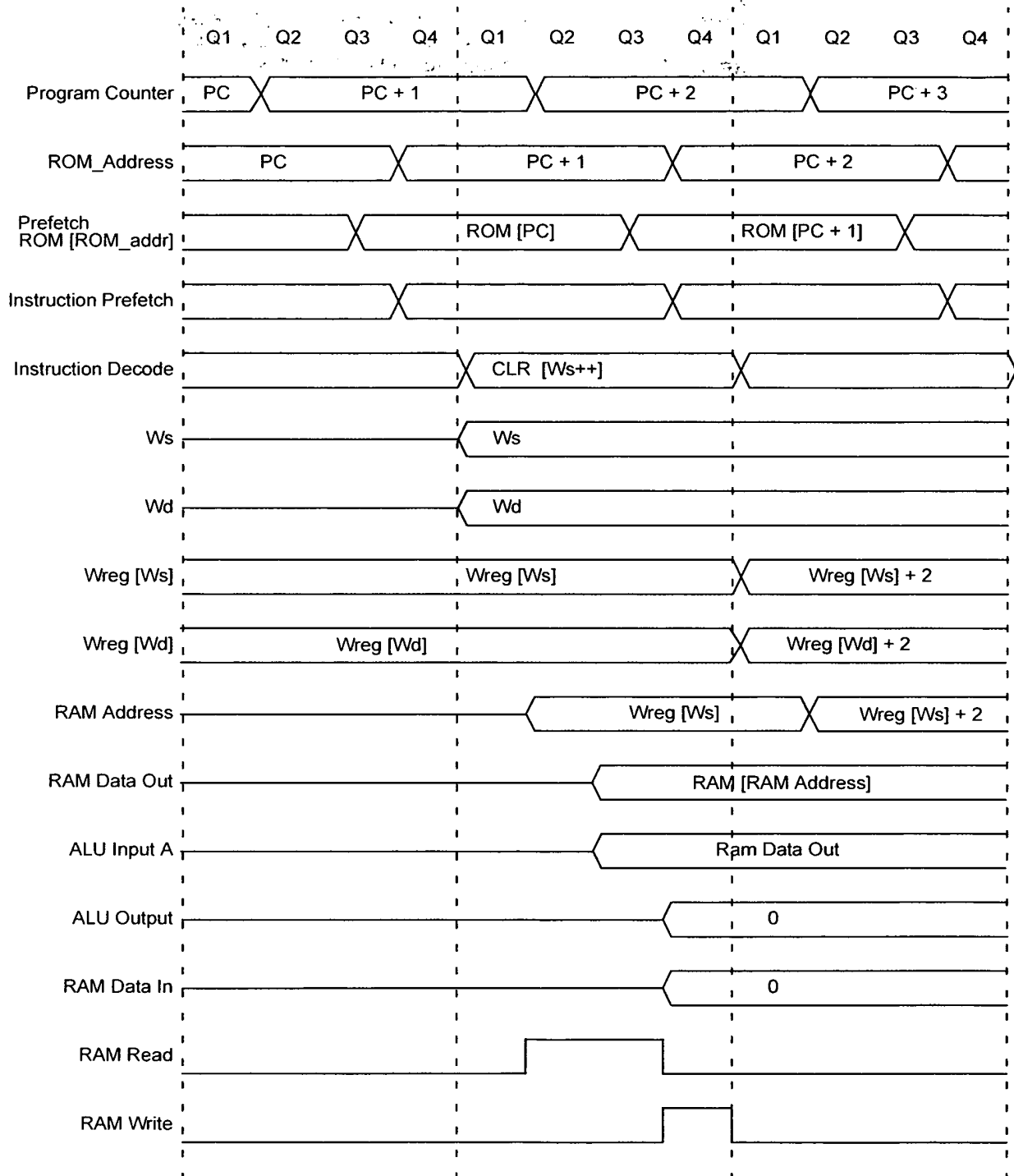


Figure 84

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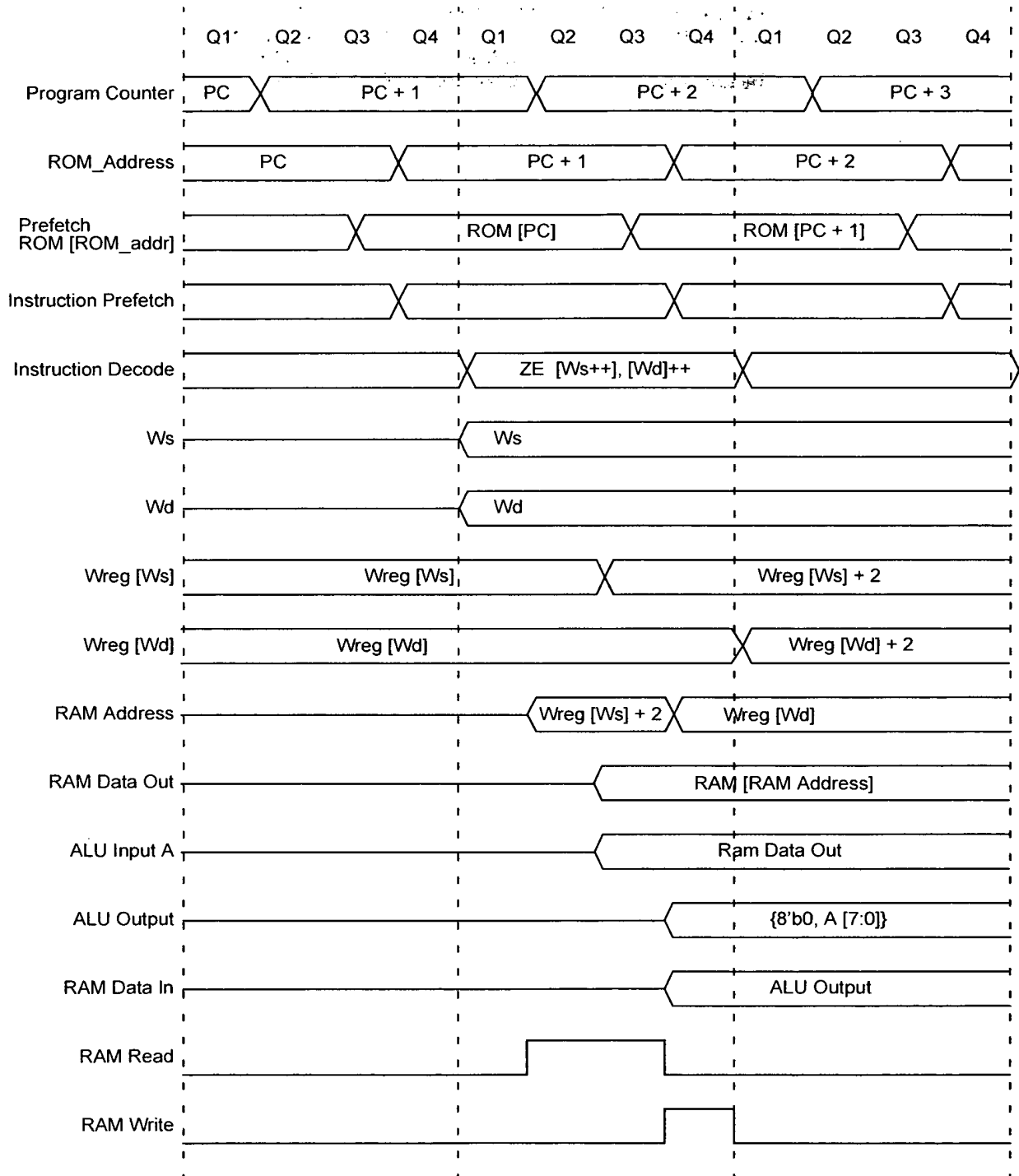


Figure 85

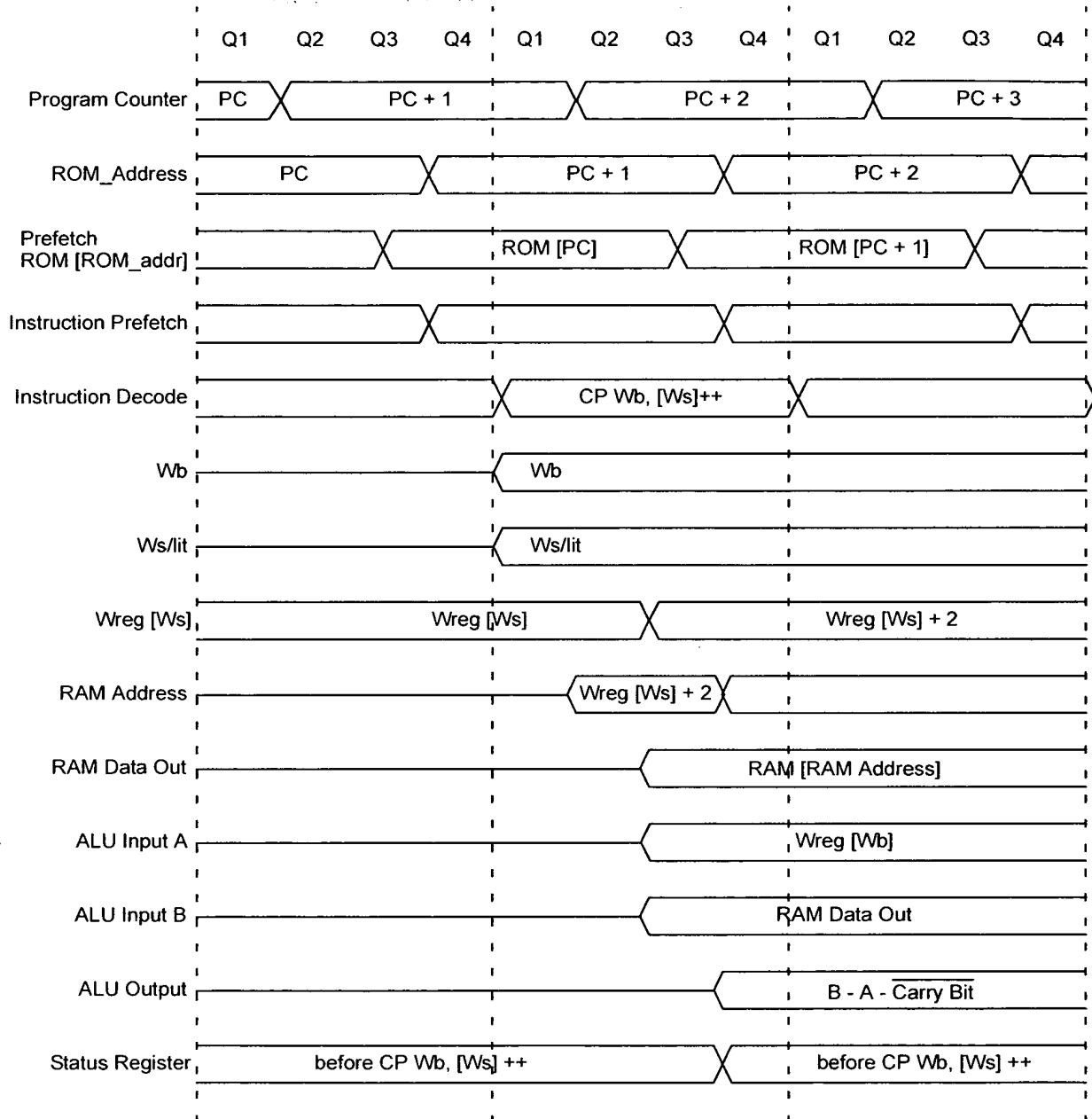


Figure 86

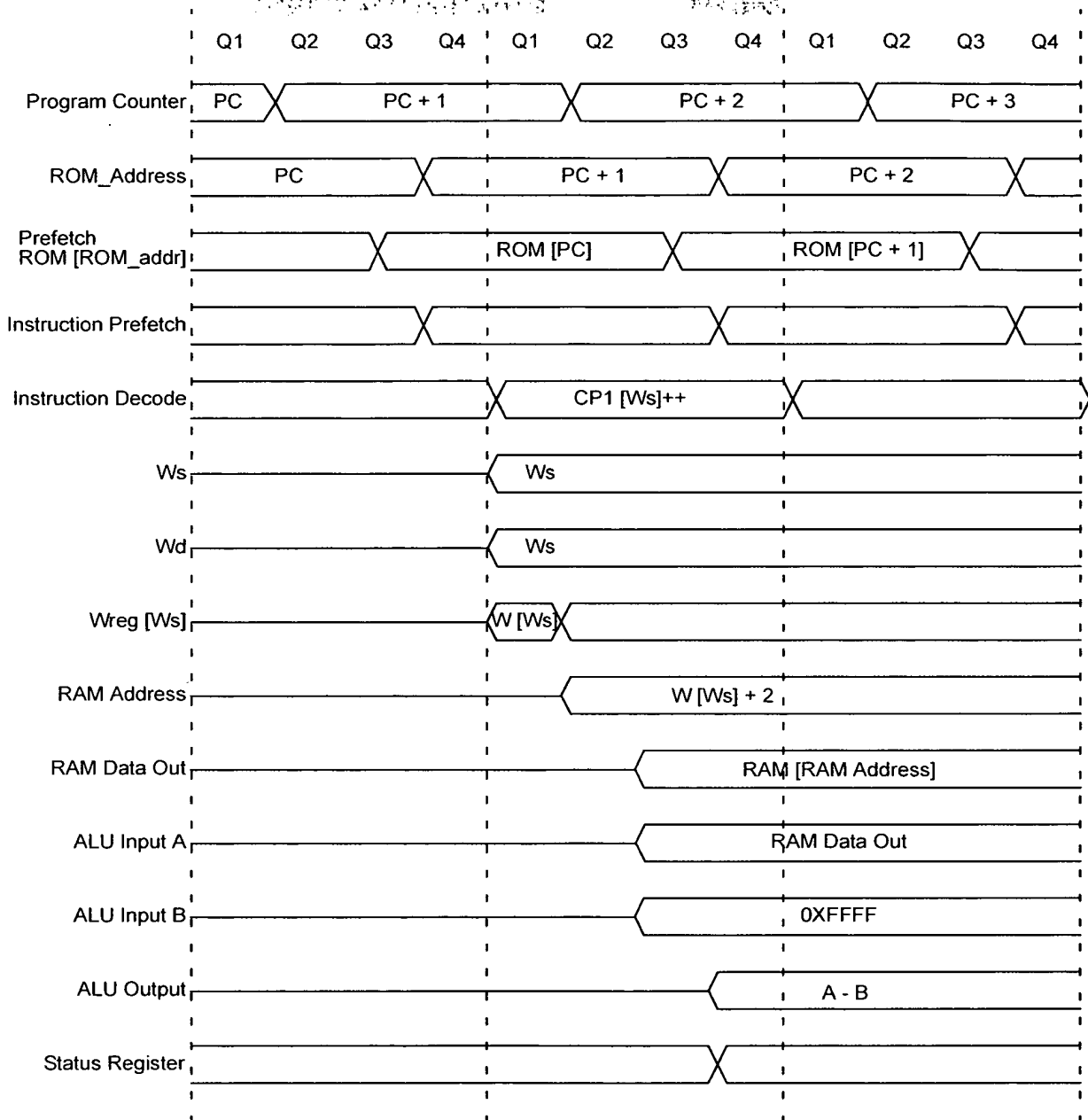


Figure 87

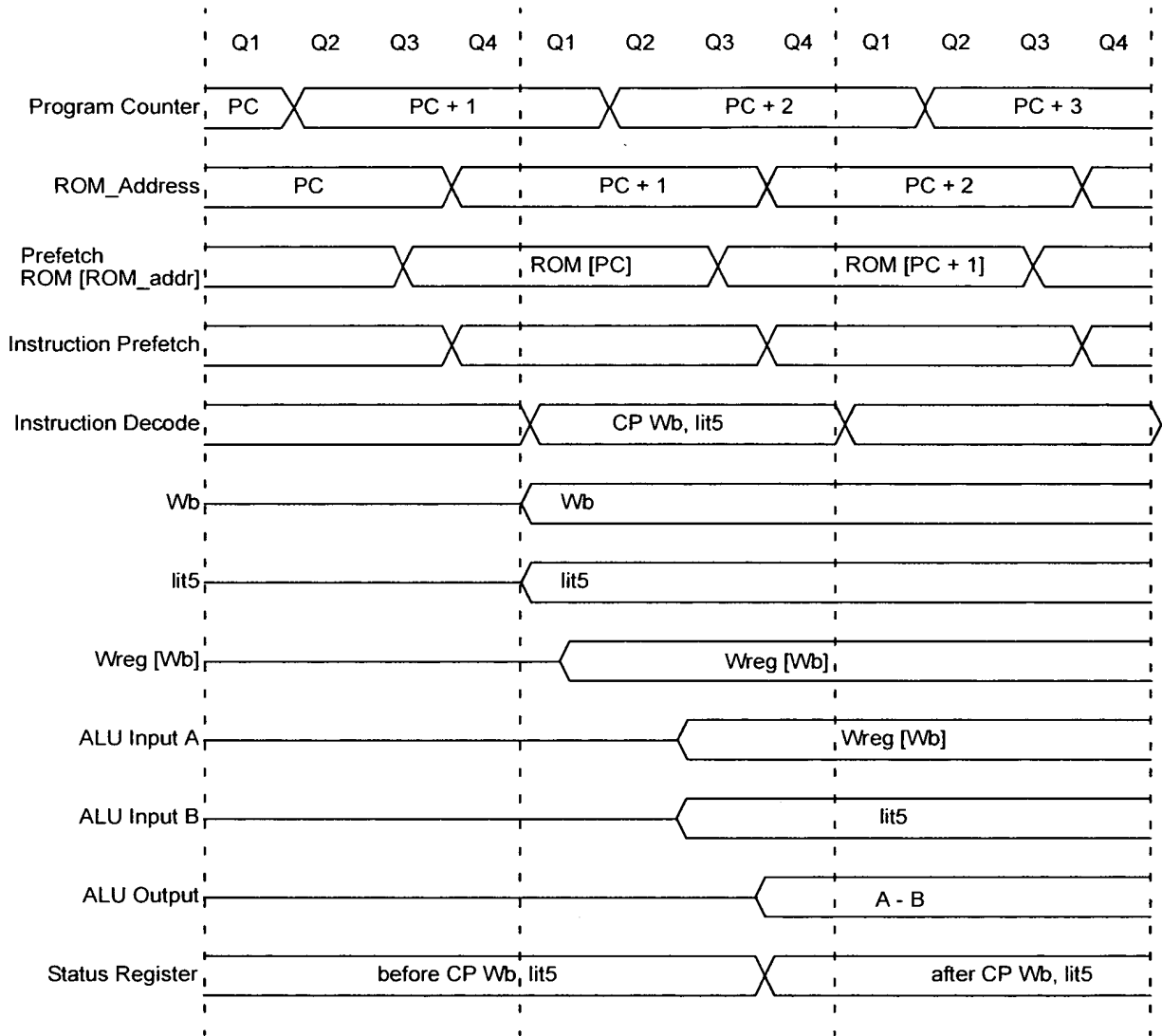


Figure 88

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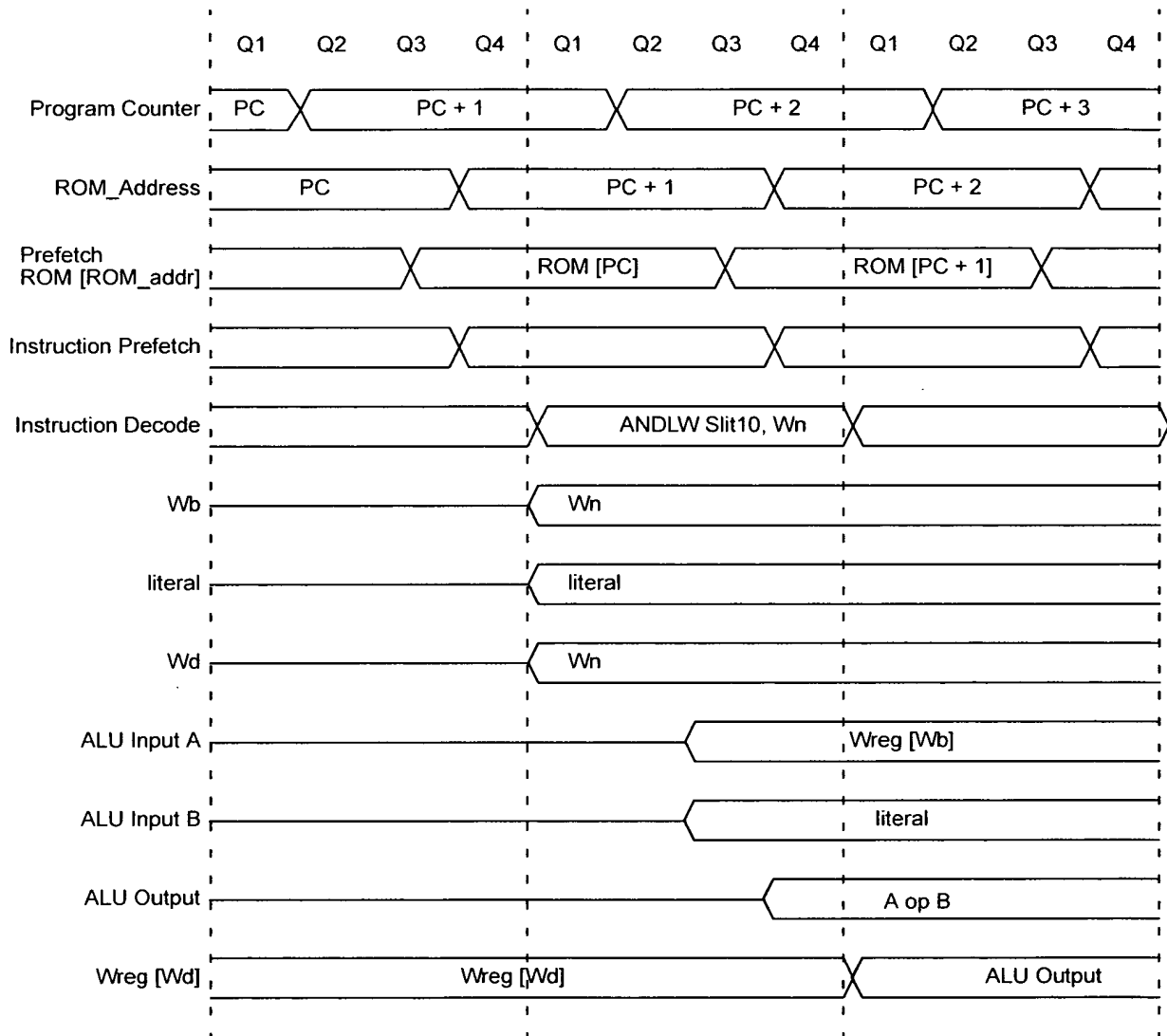
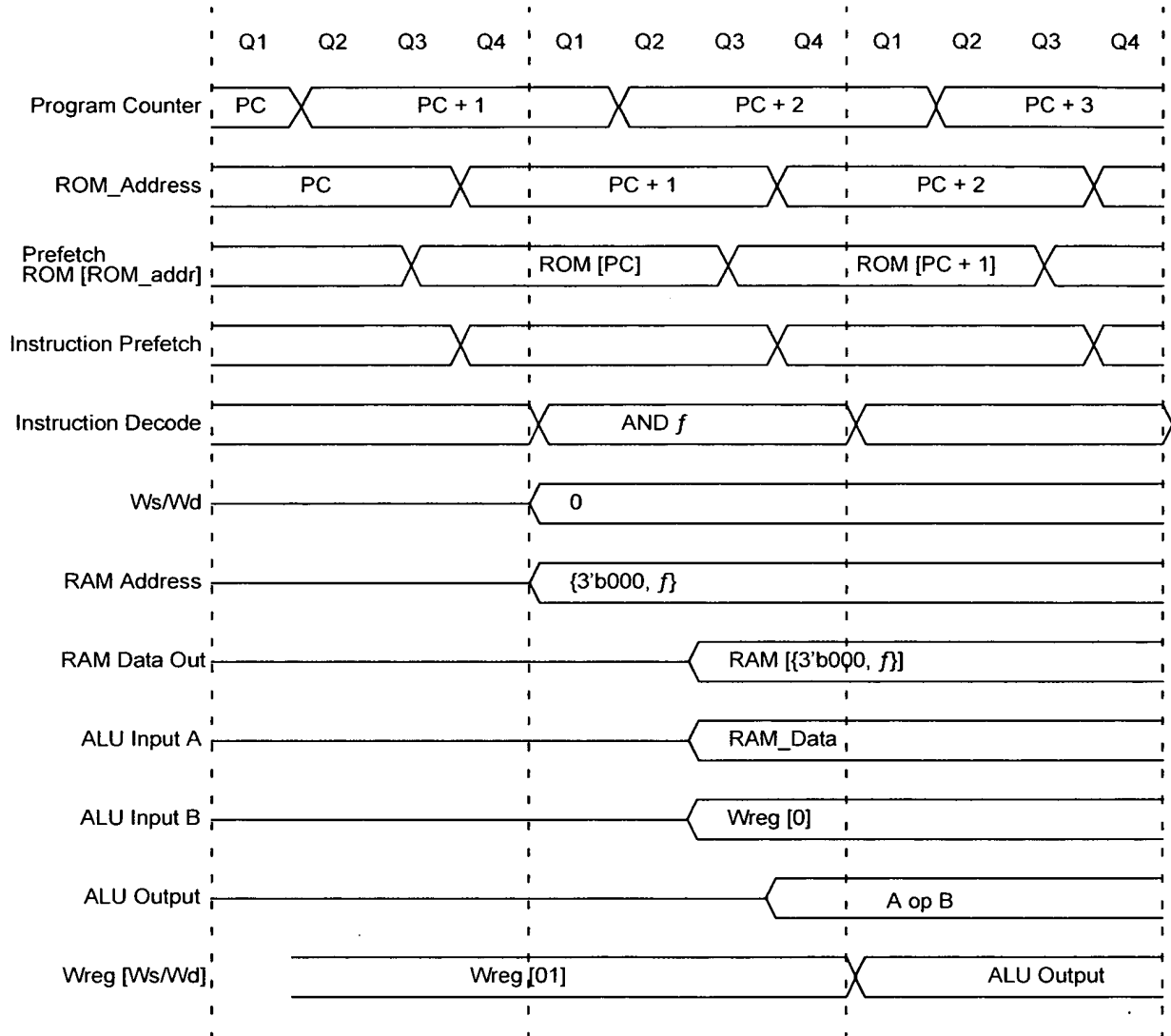
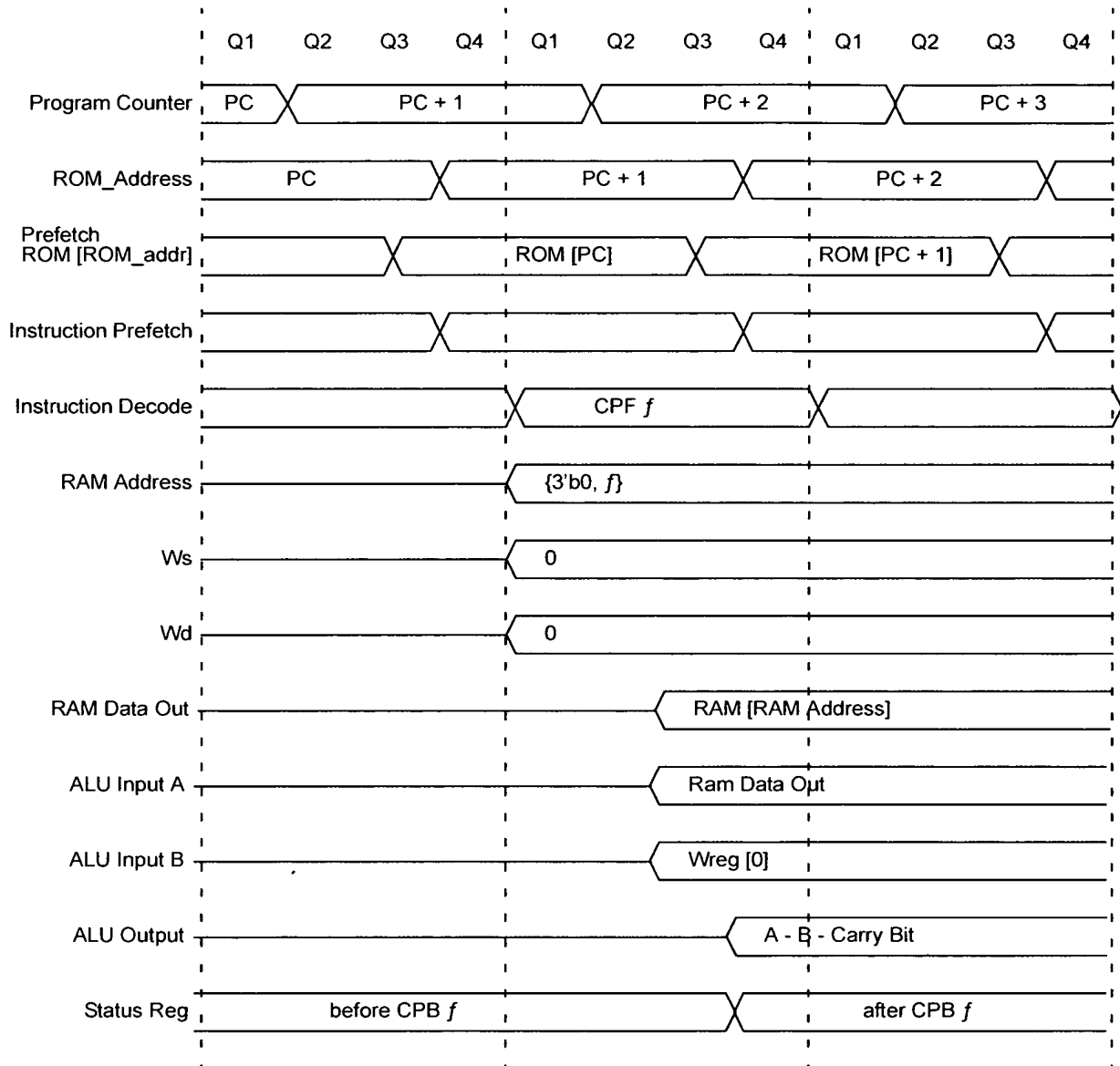
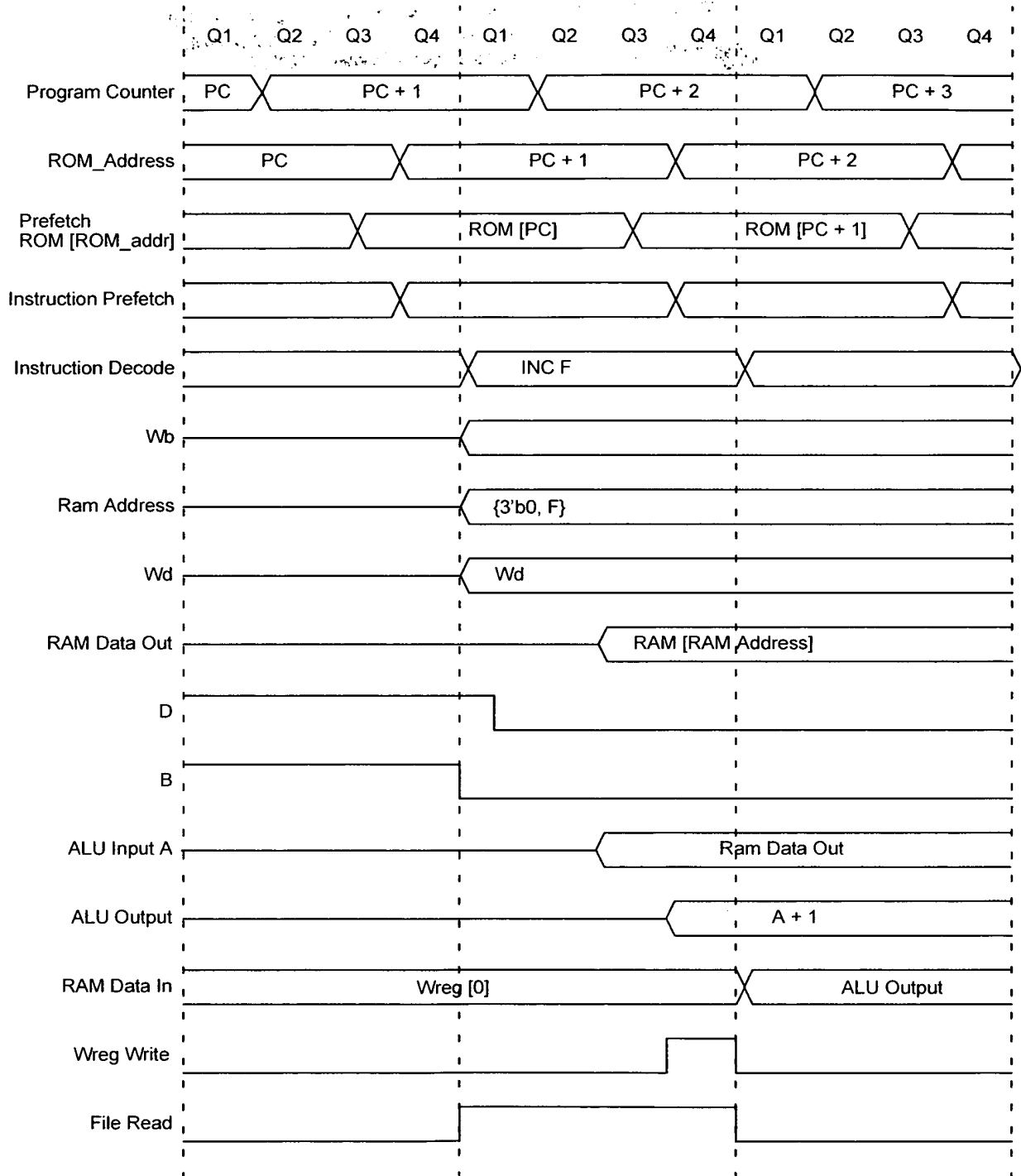
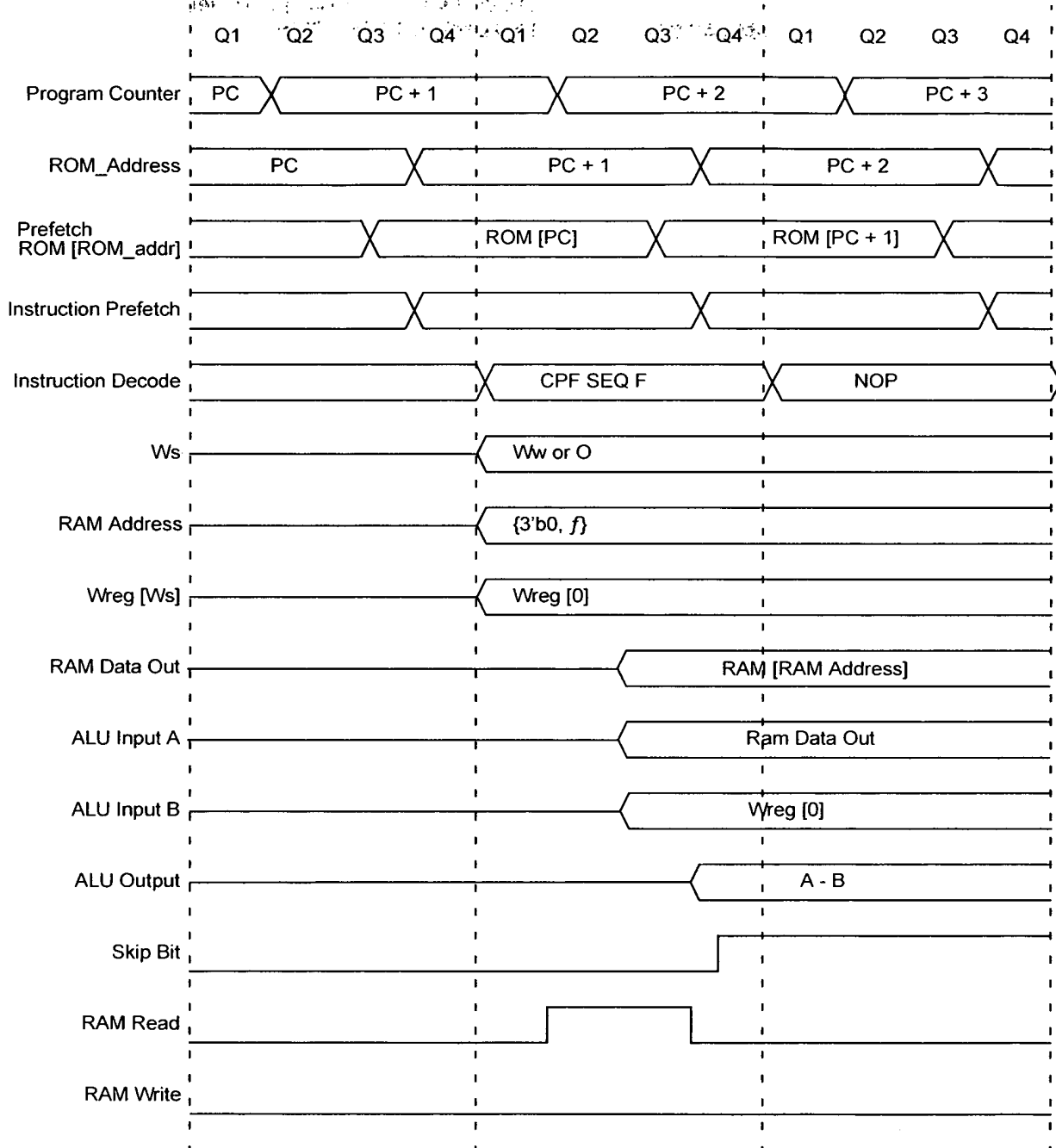


Figure 89

**Figure 90**

**Figure 91**

**Figure 92**

**Figure 93**

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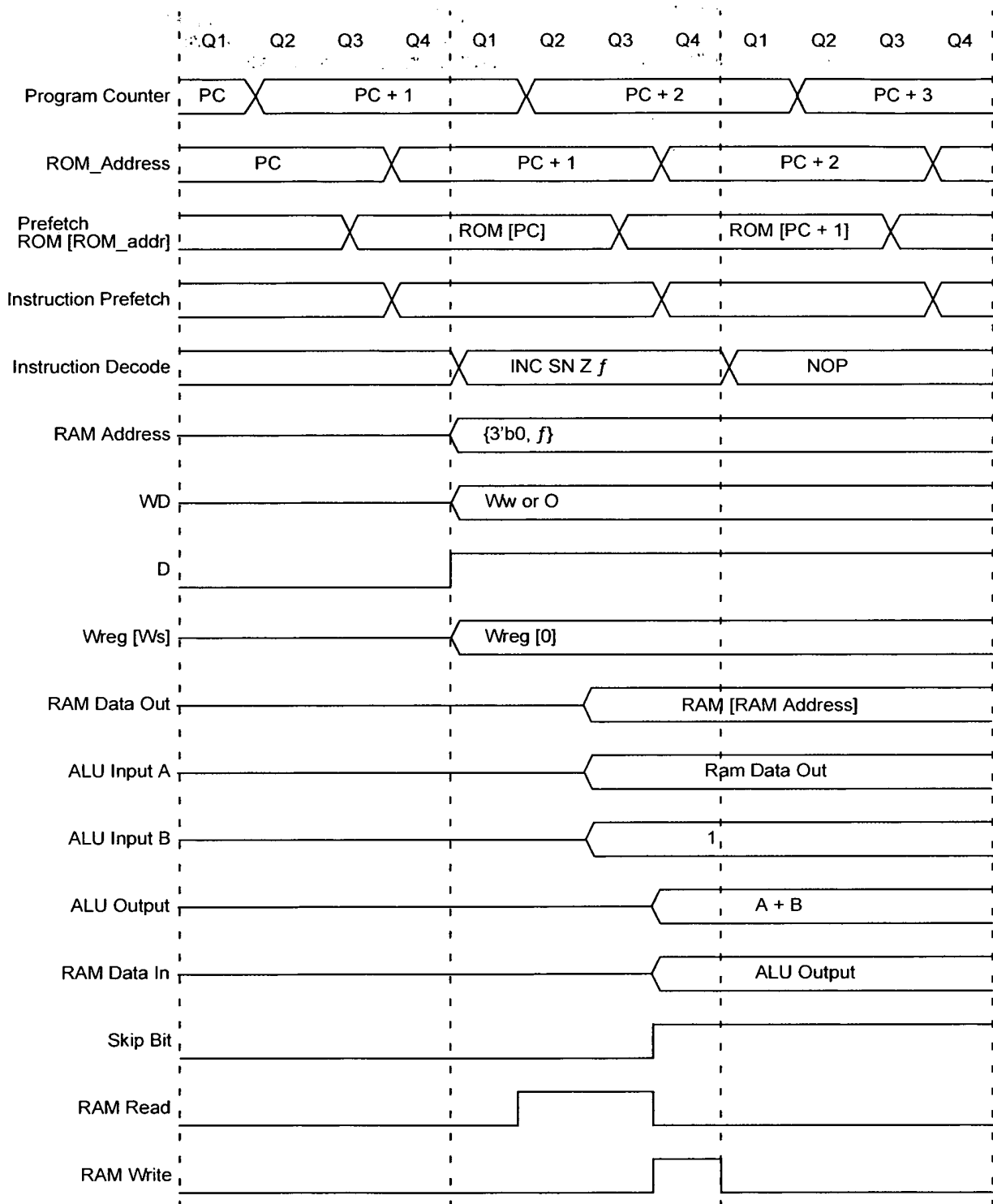


Figure 94

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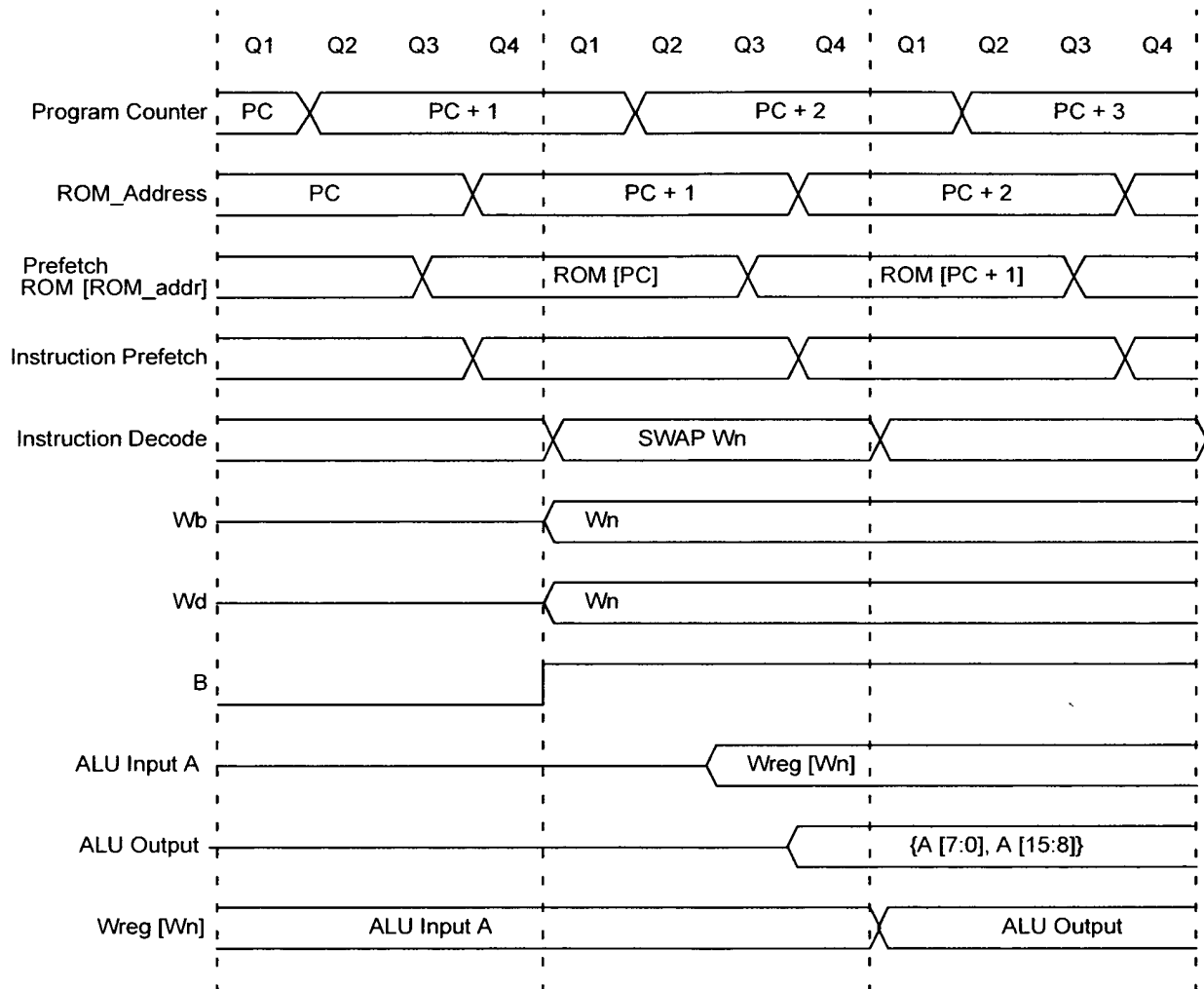


Figure 95

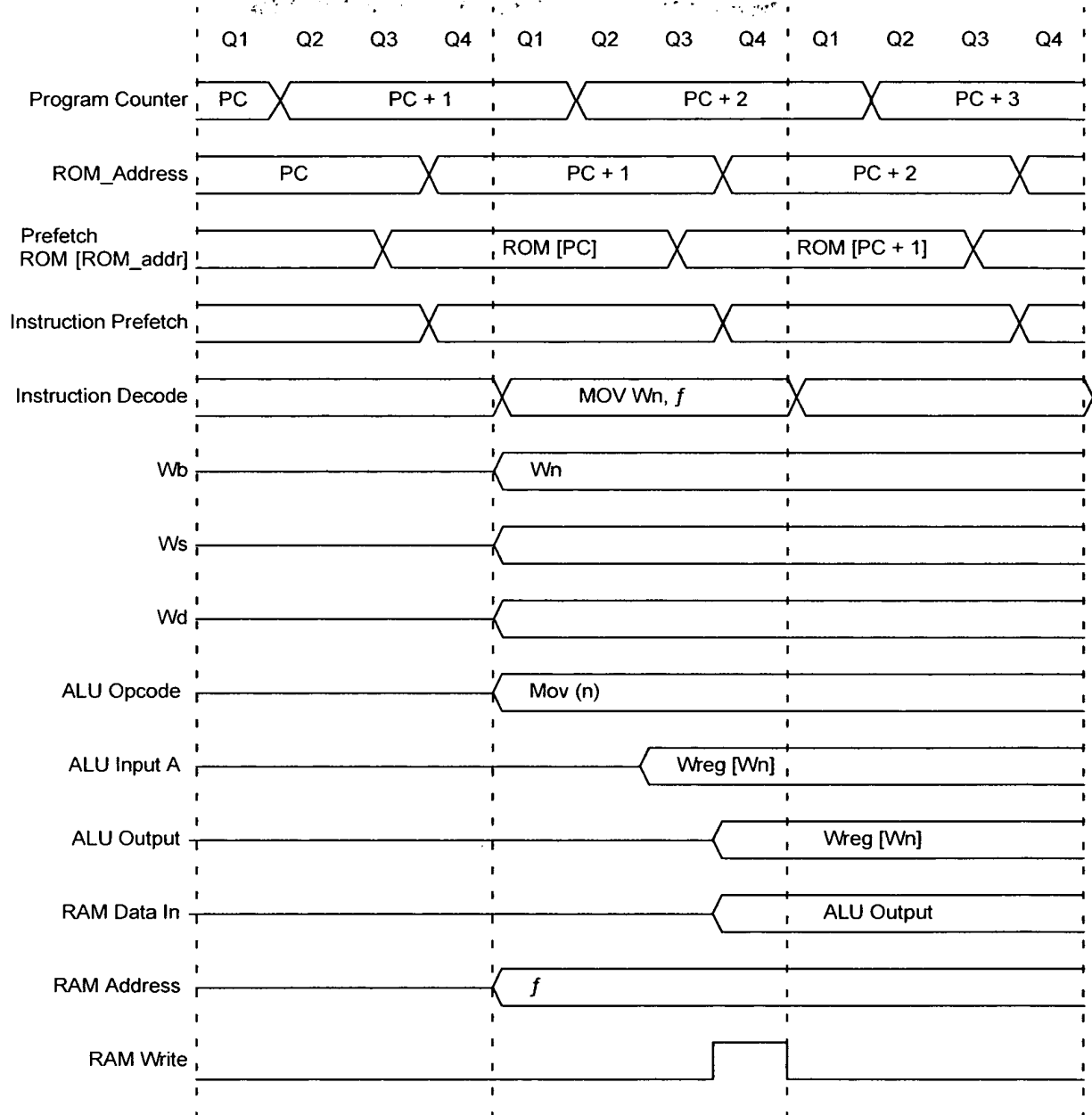
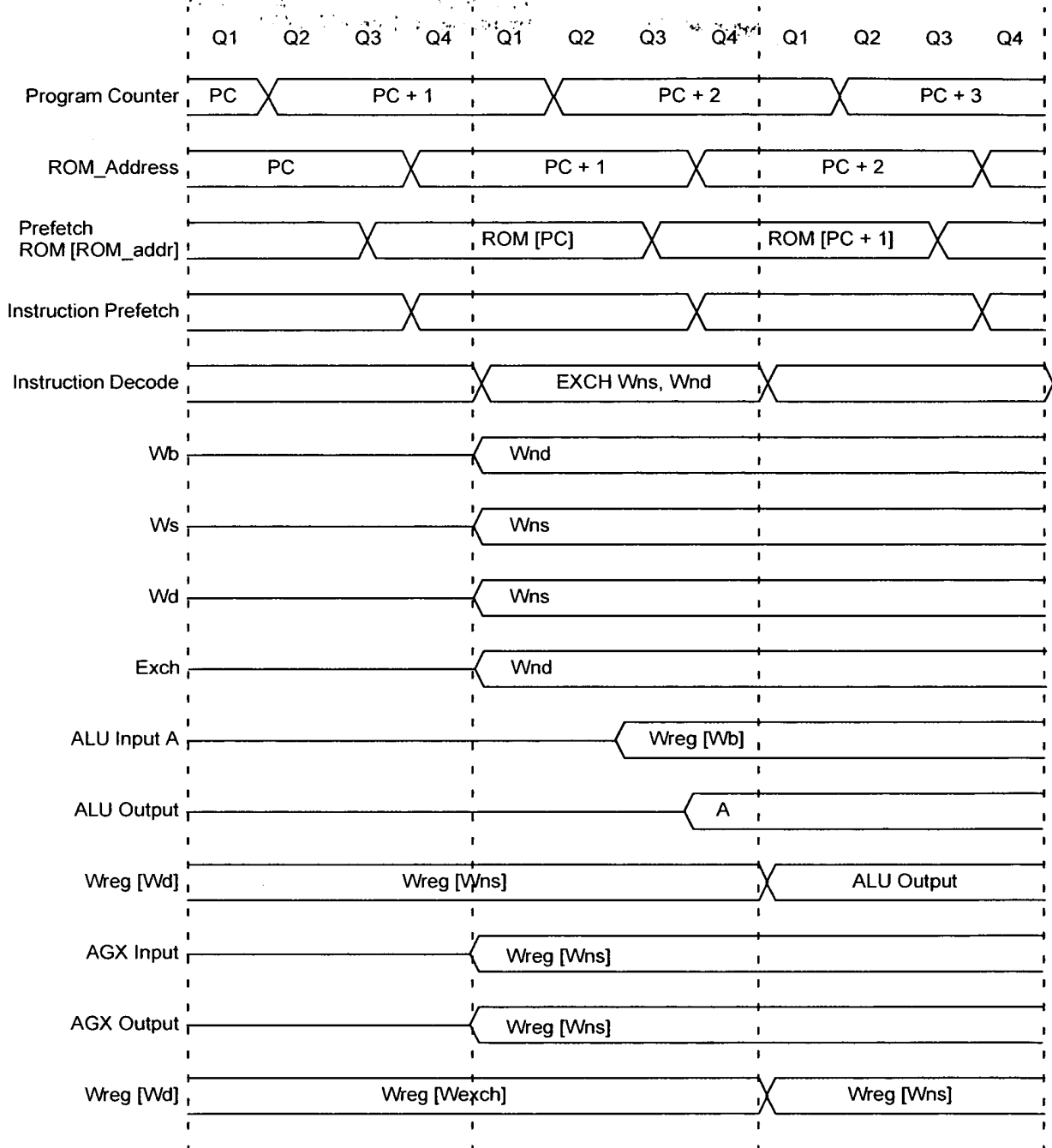


Figure 96

**Figure 97**

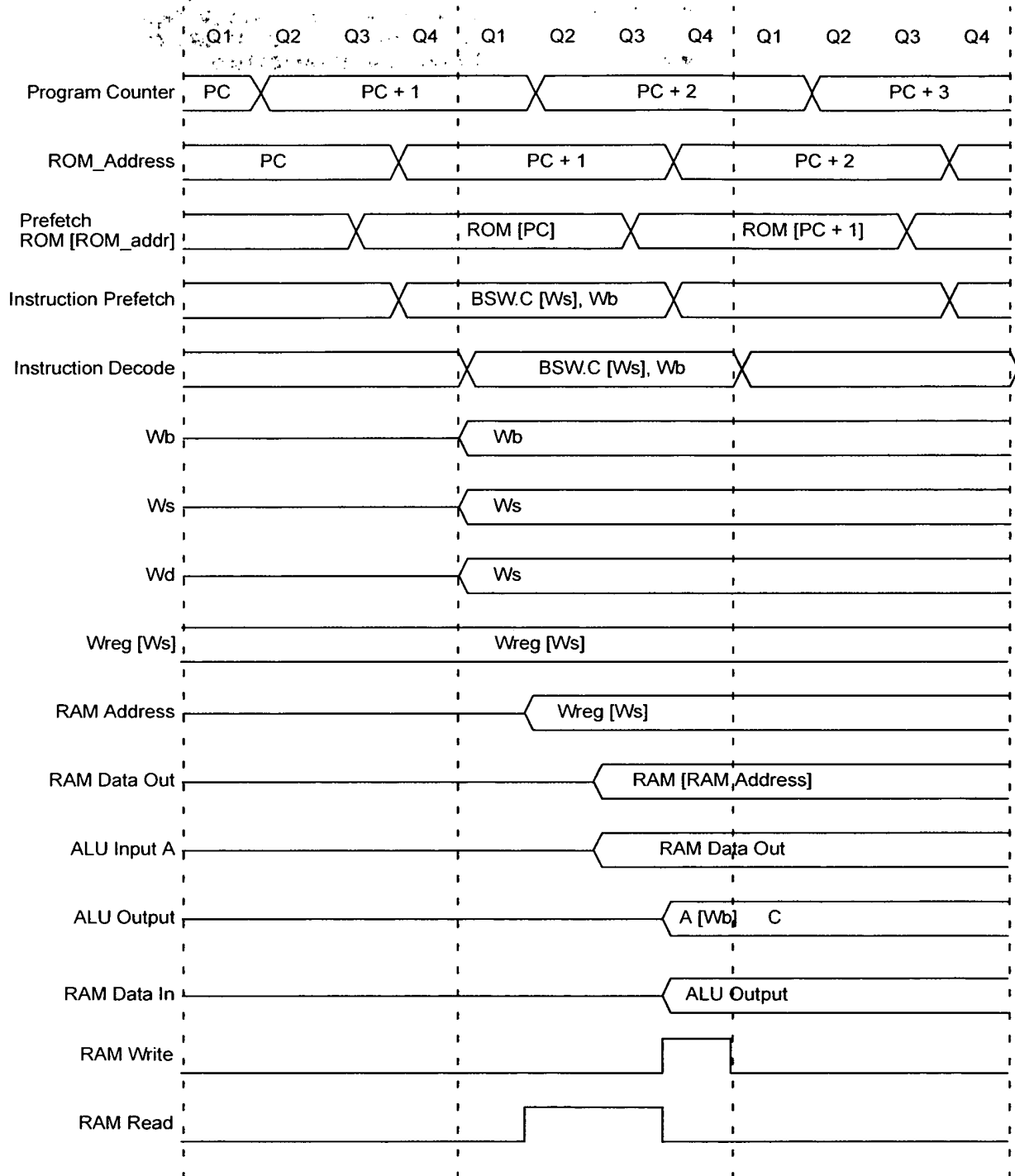


Figure 98

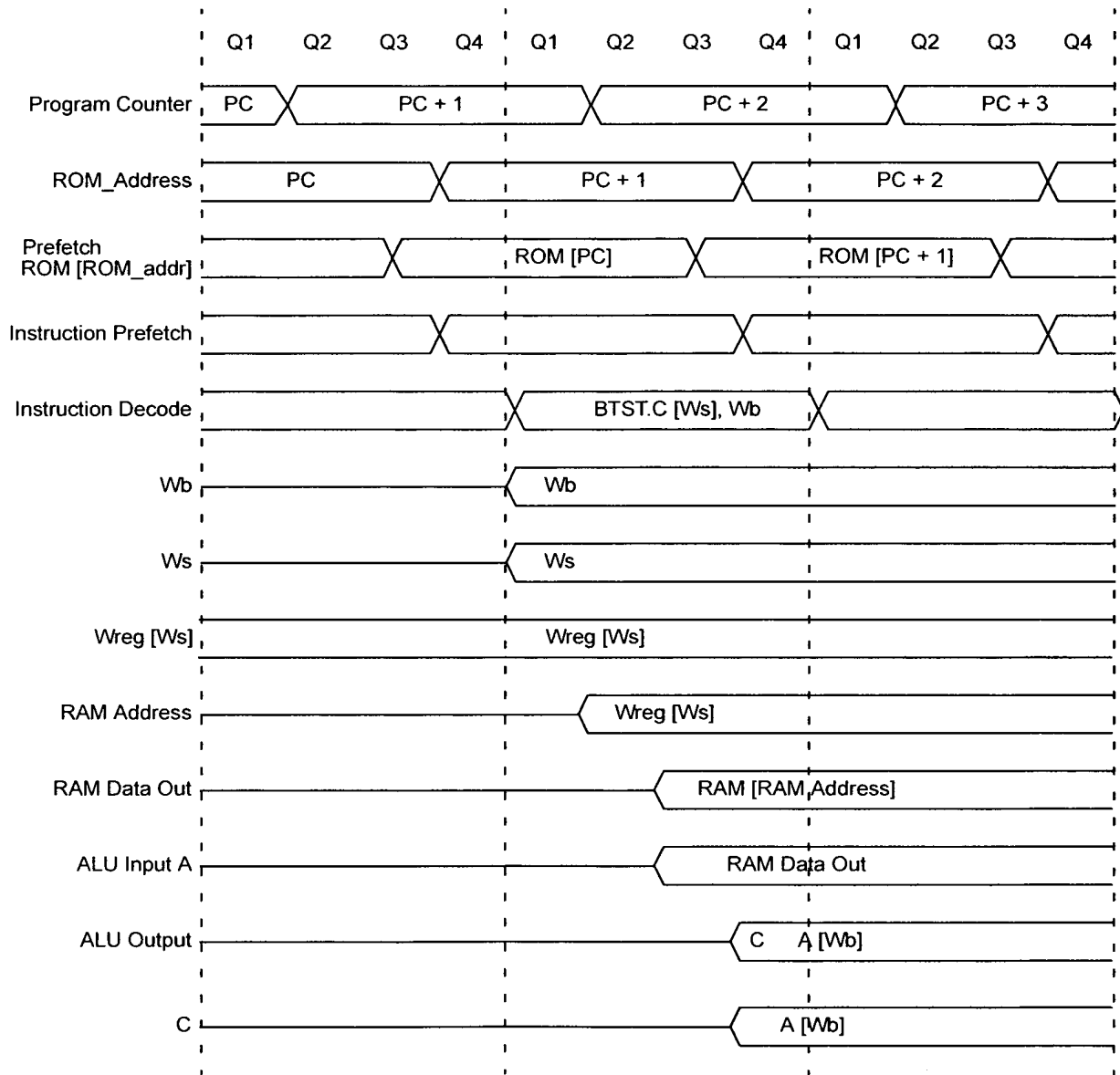
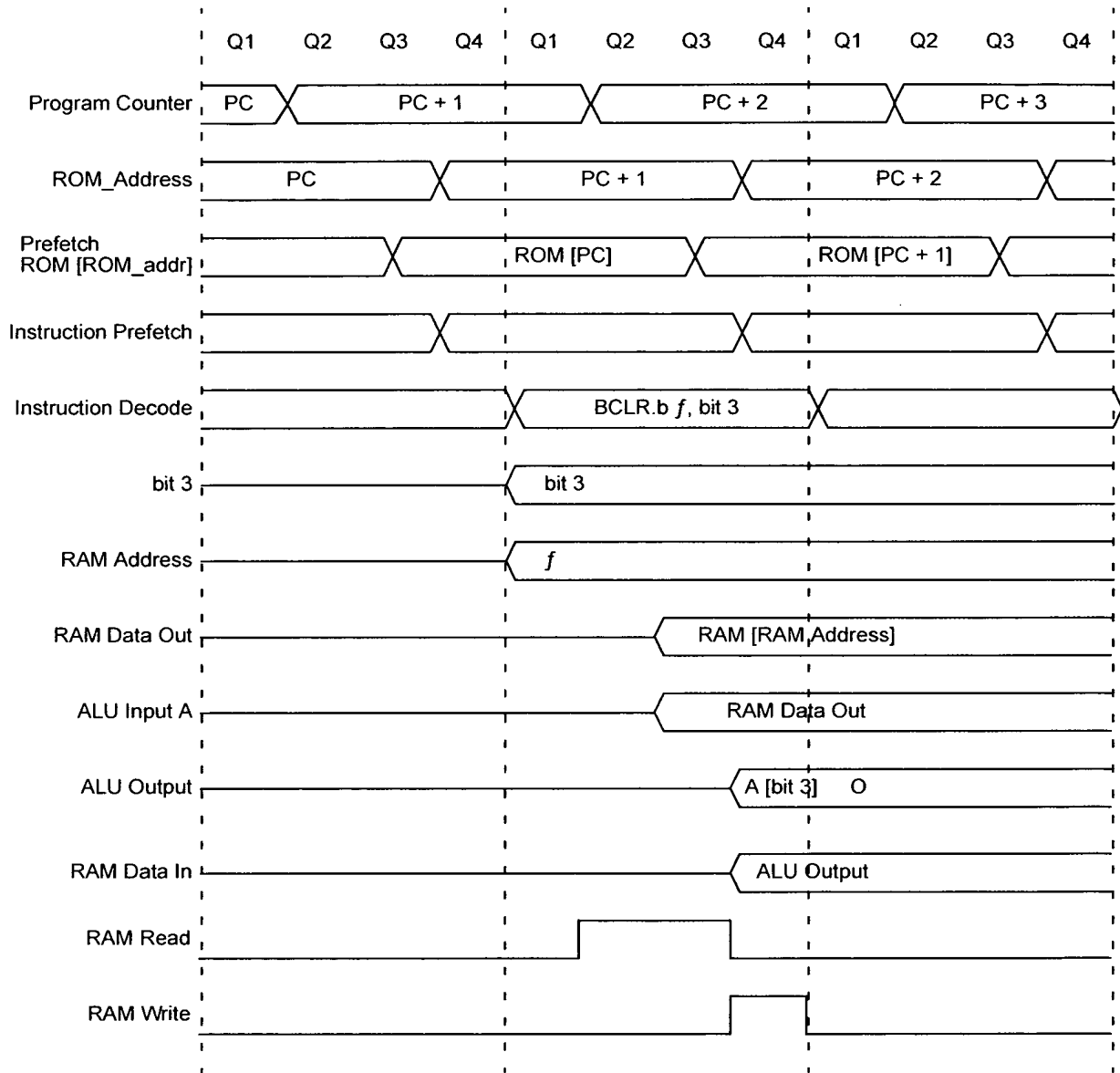
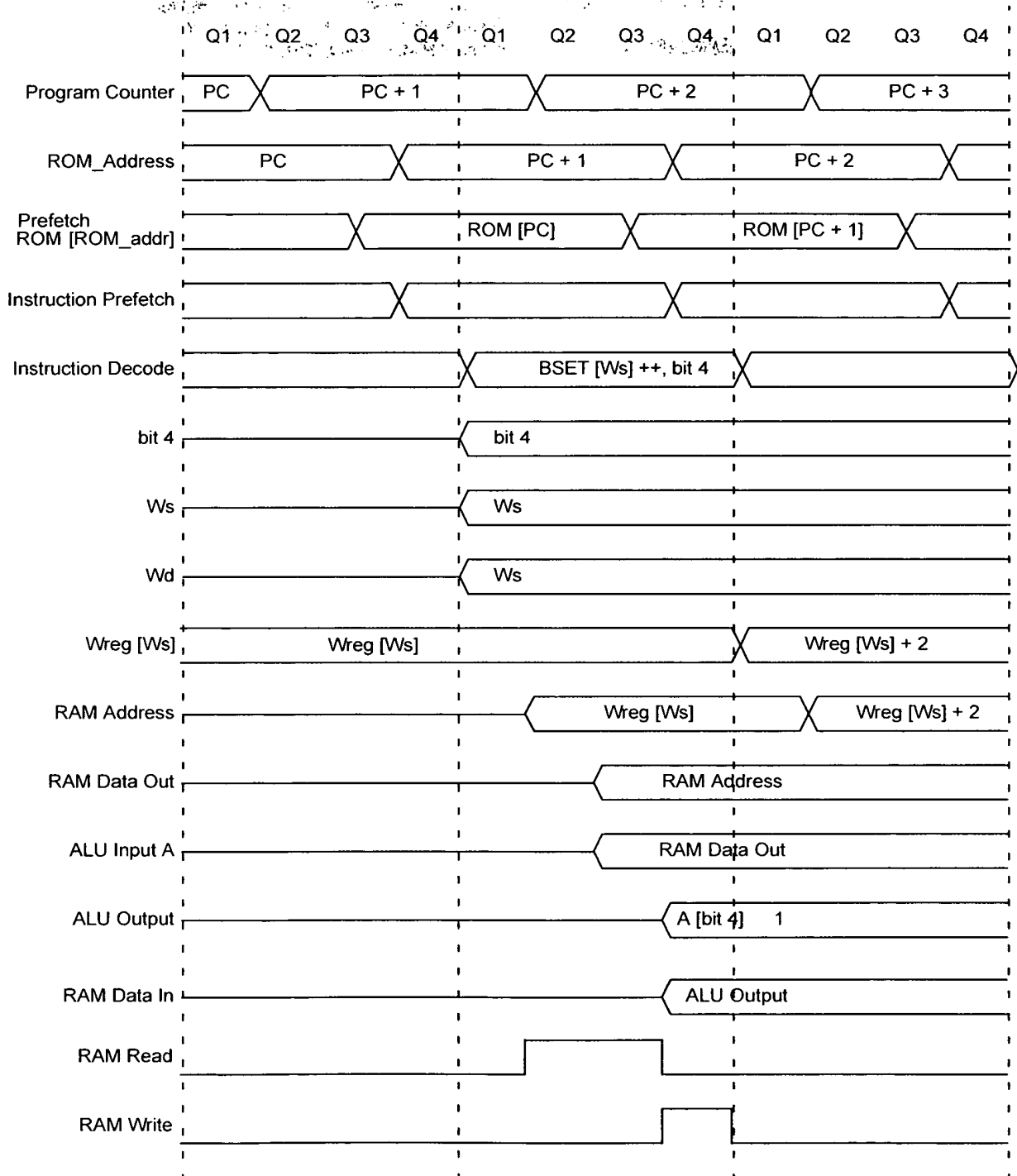


Figure 99

**Figure 100**

**Figure 101**

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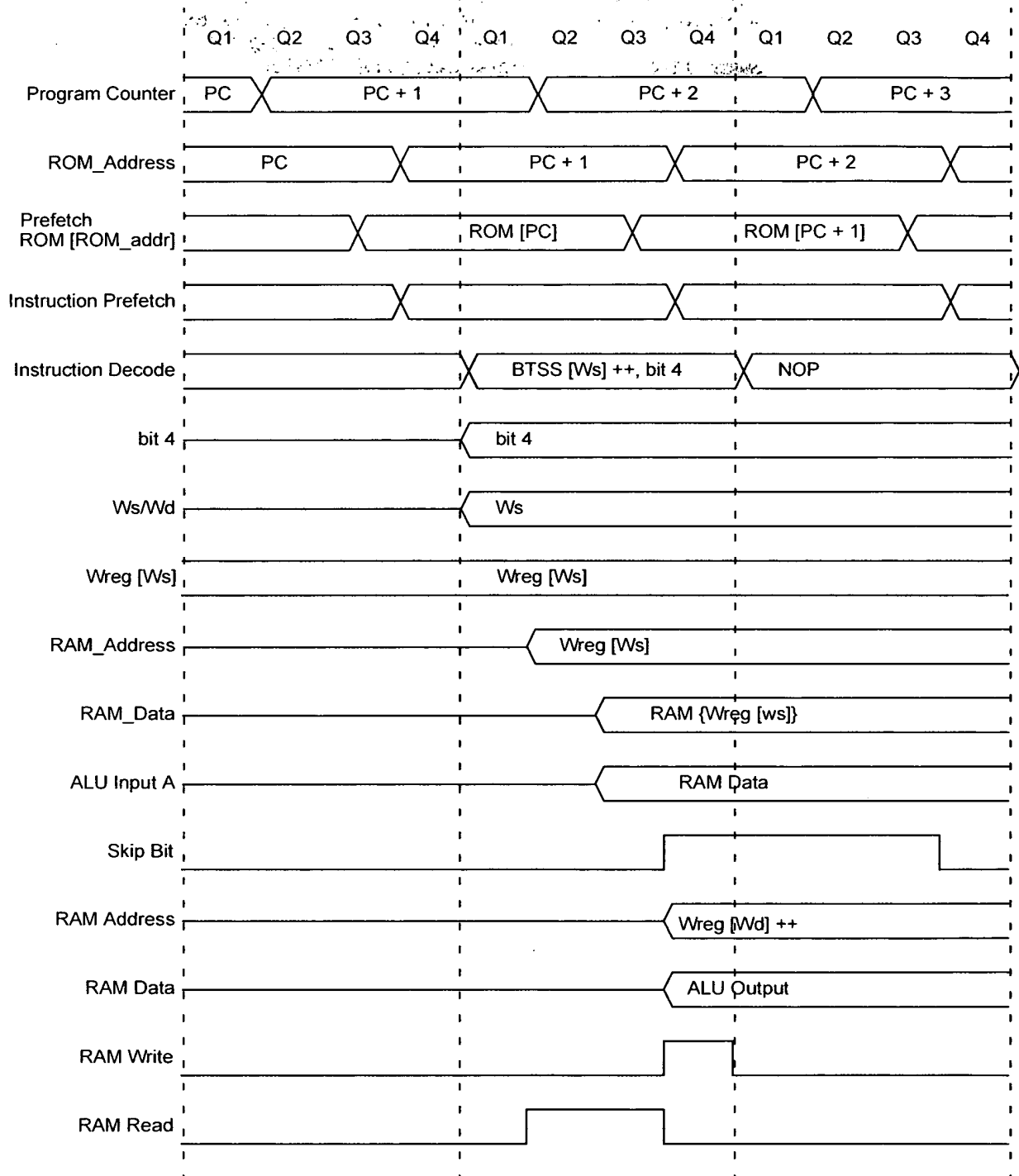


Figure 102

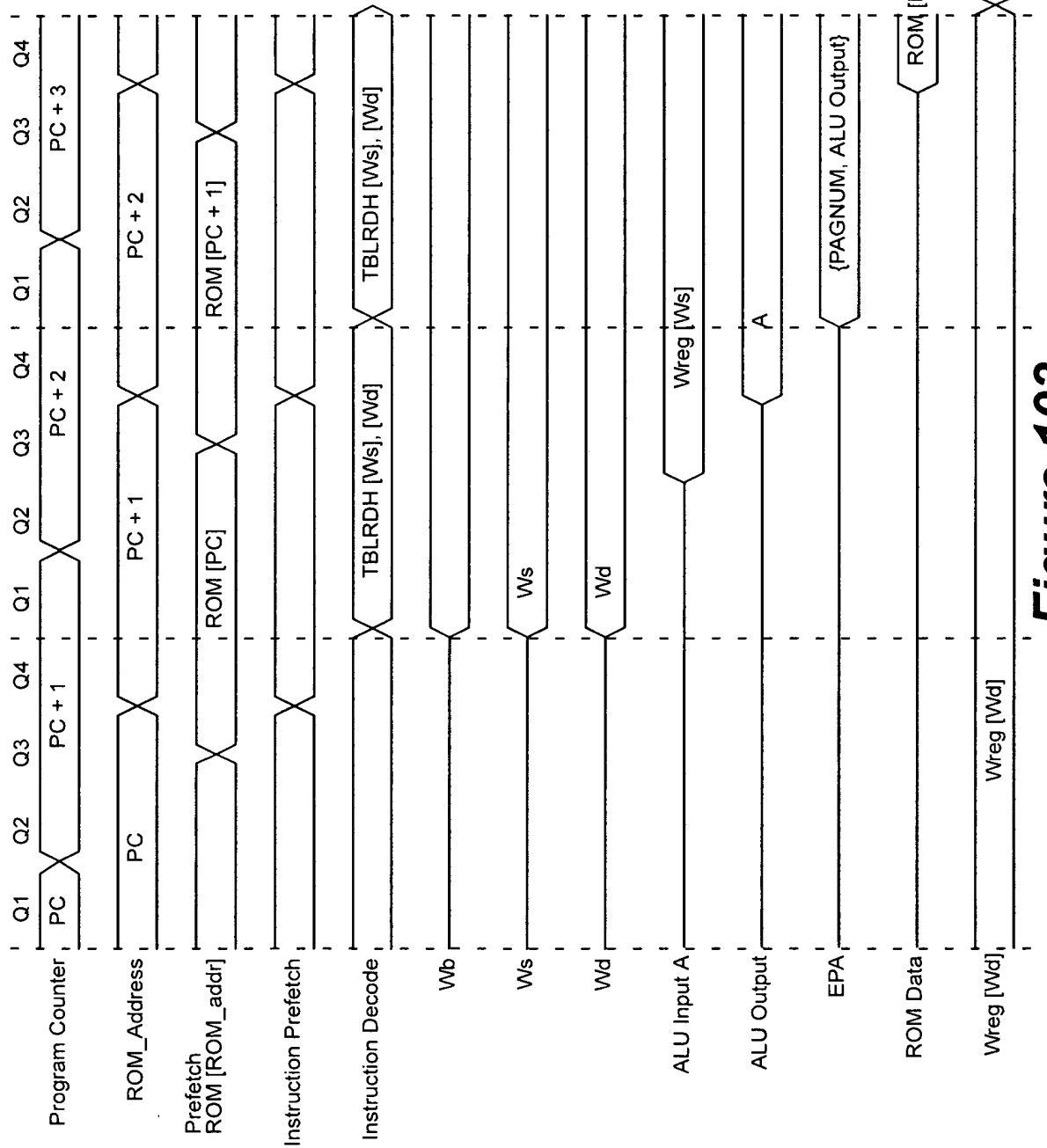


Figure 103

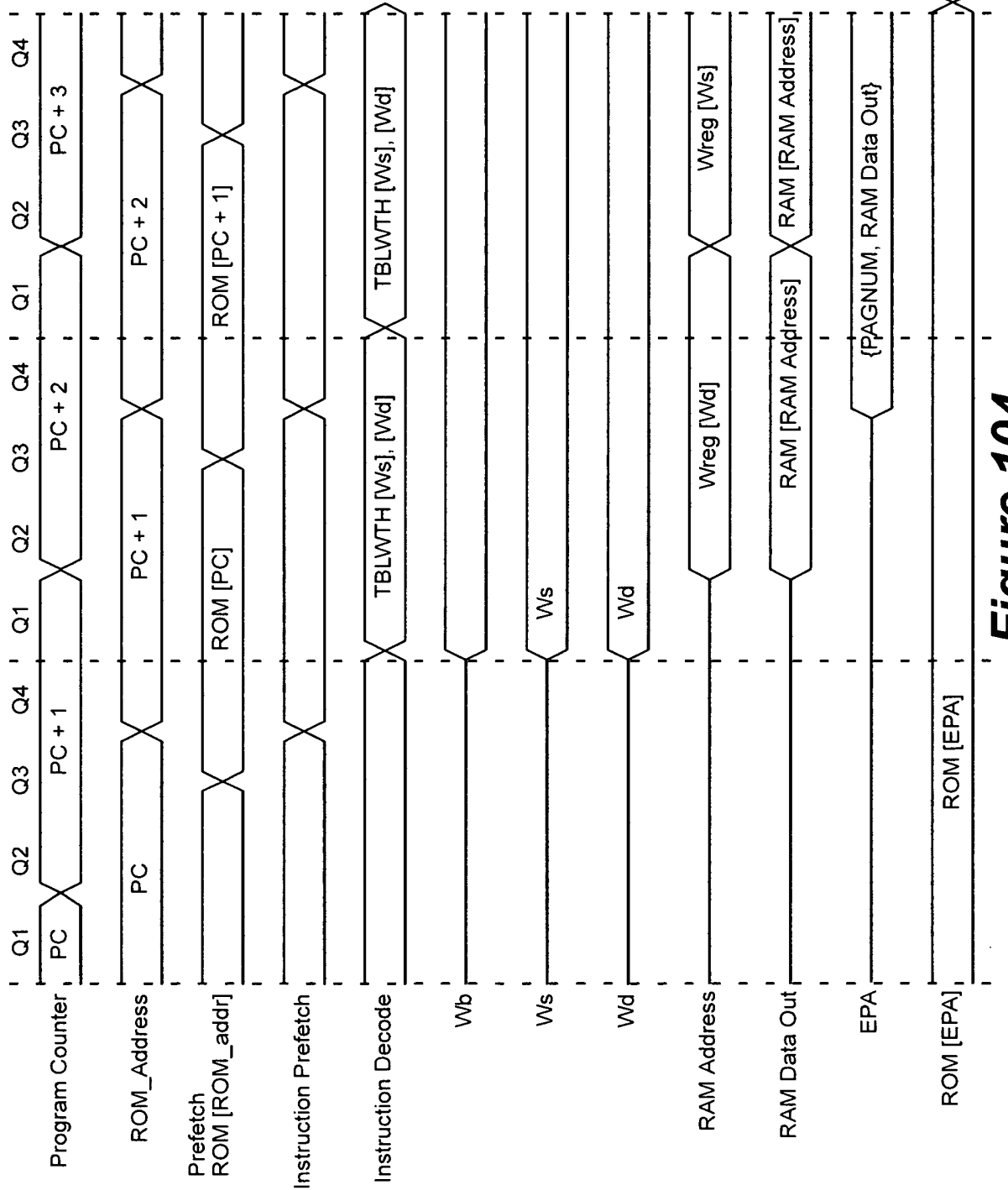


Figure 104

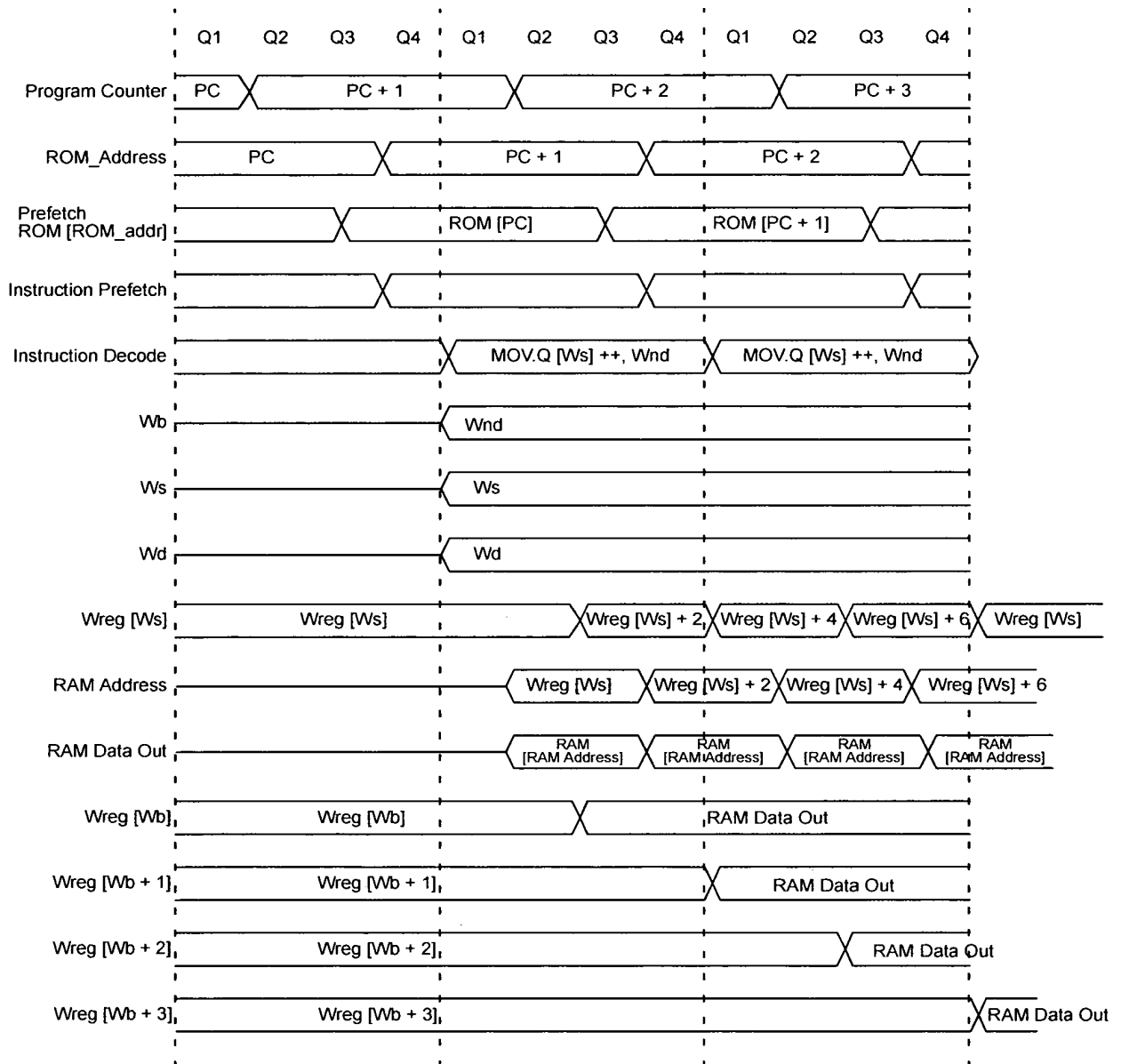
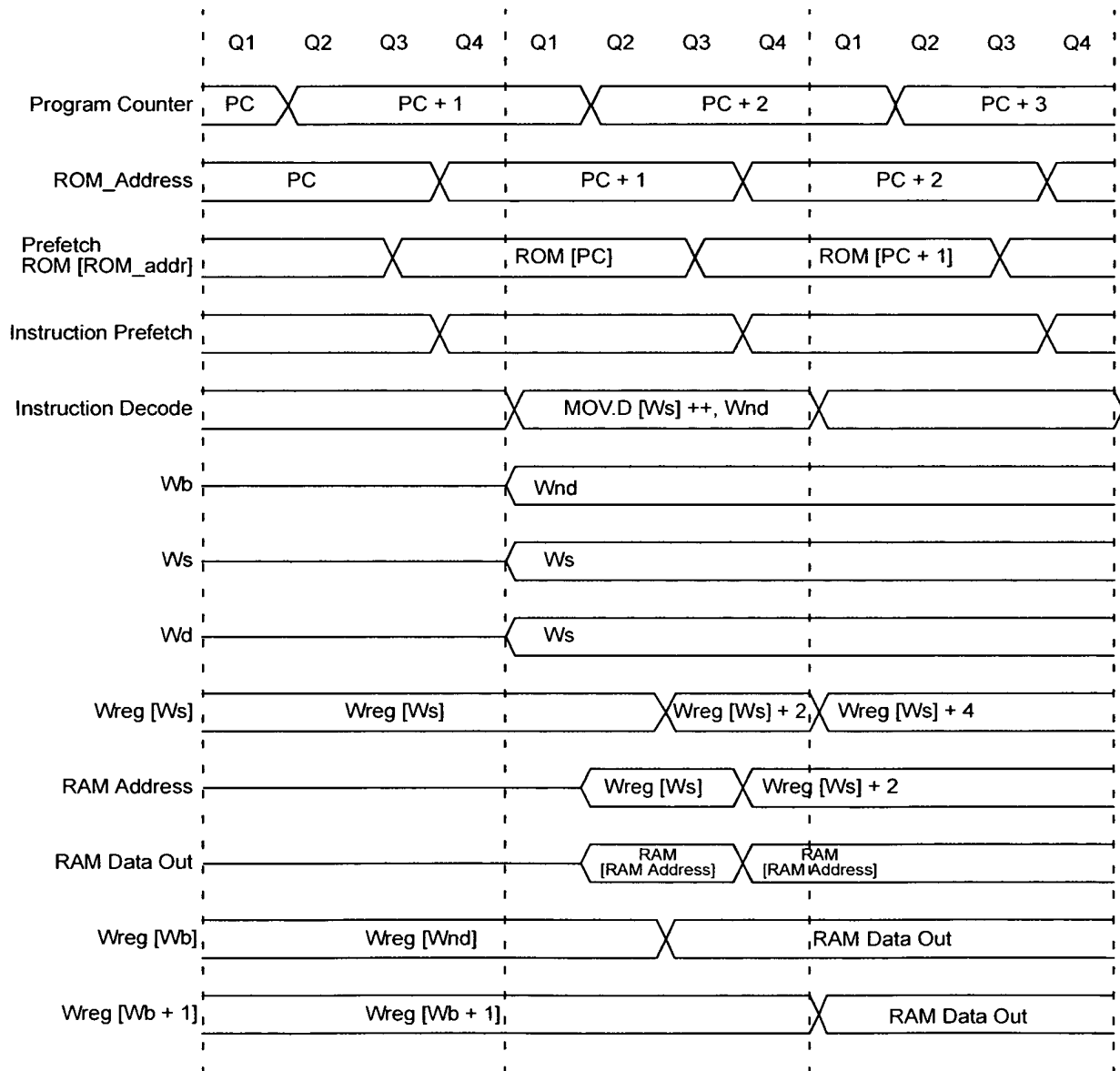


Figure 105

**Figure 106**

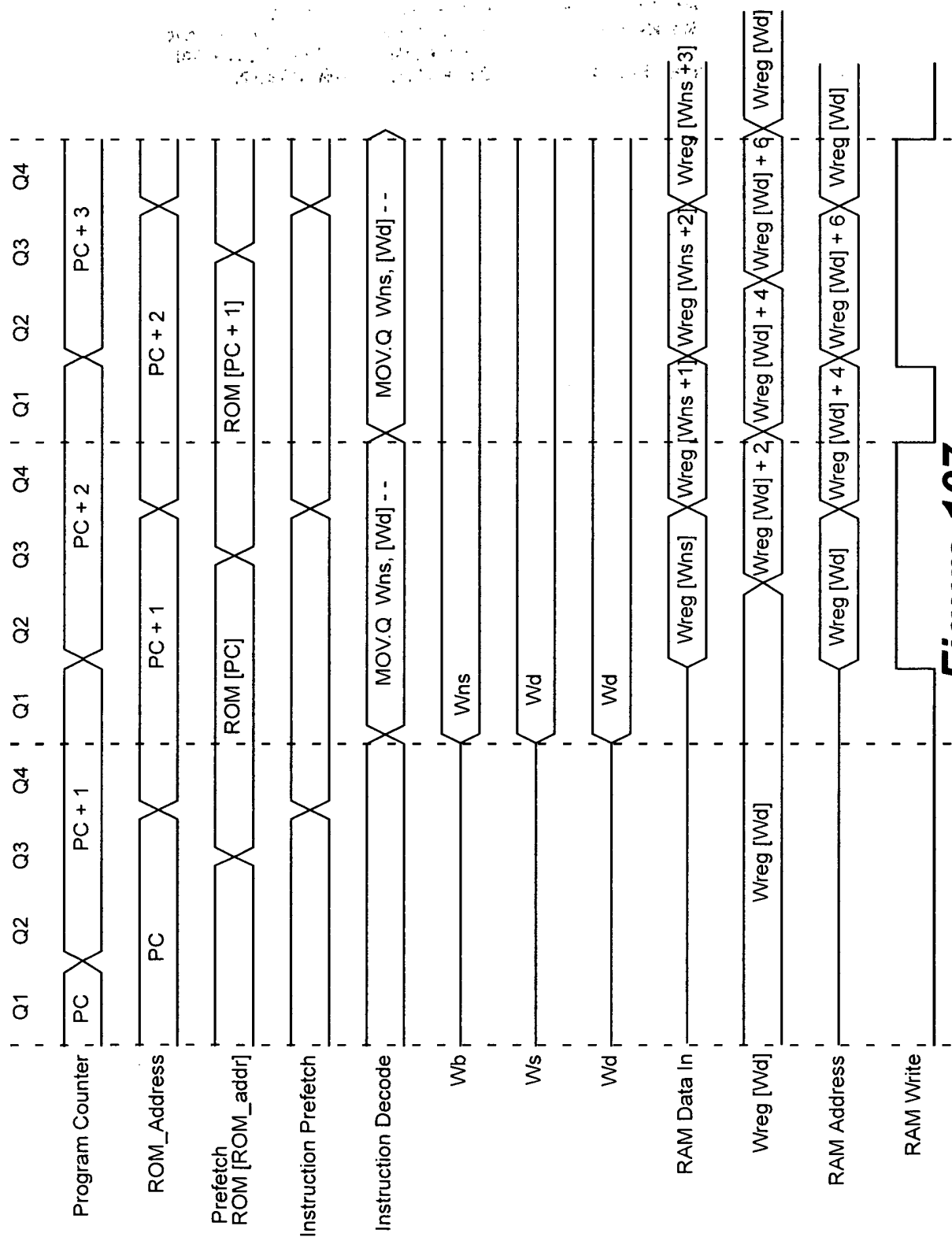
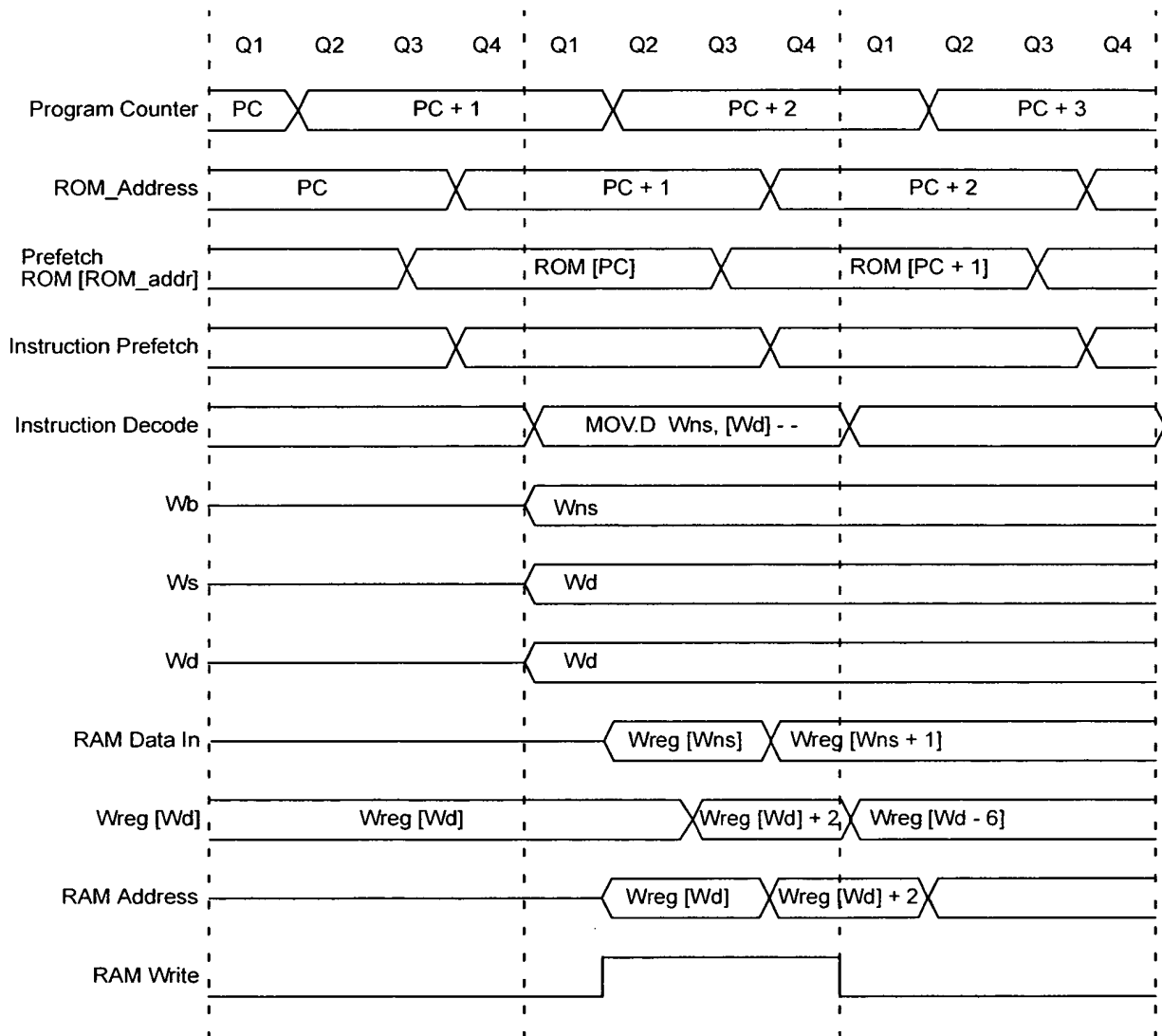
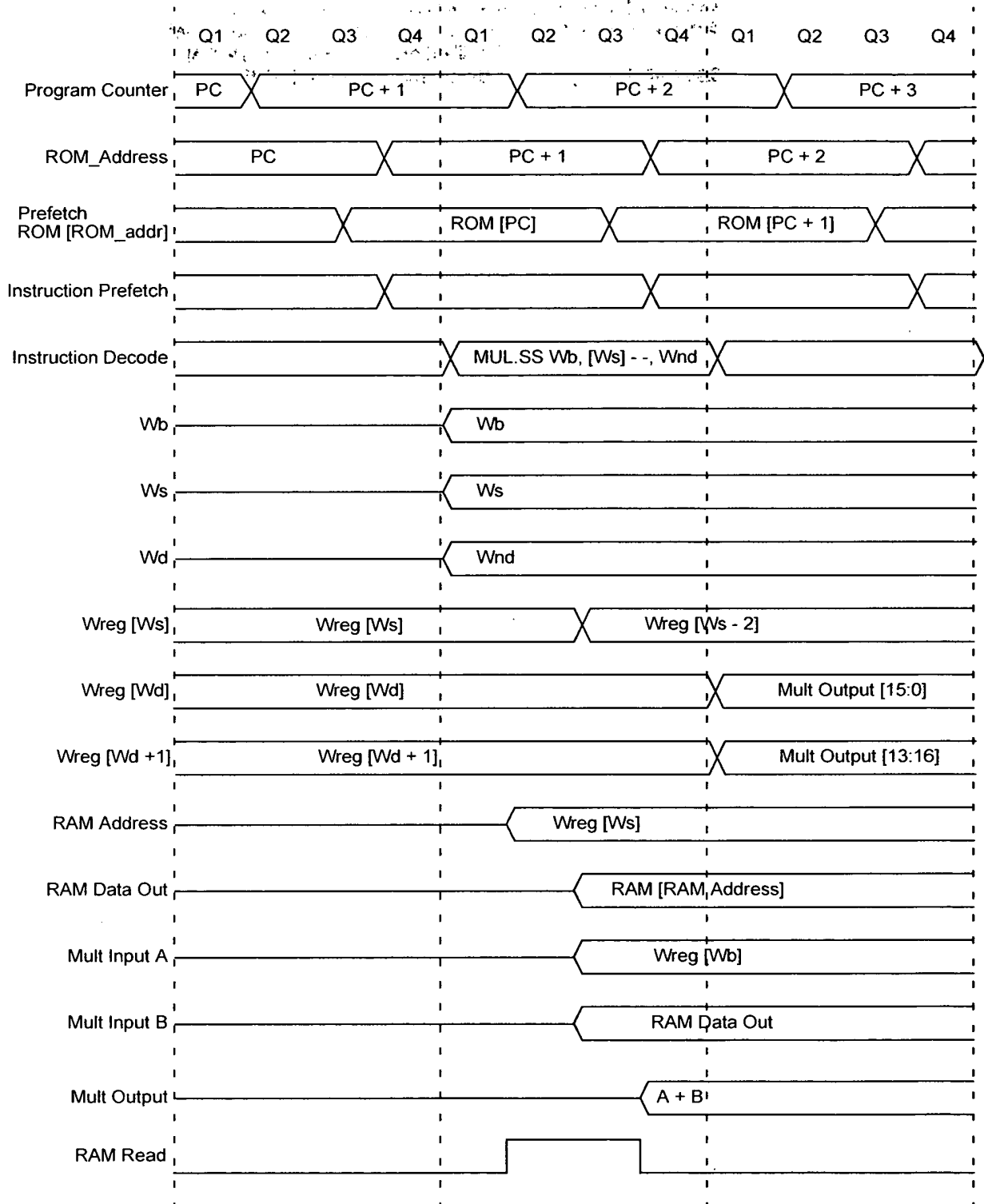
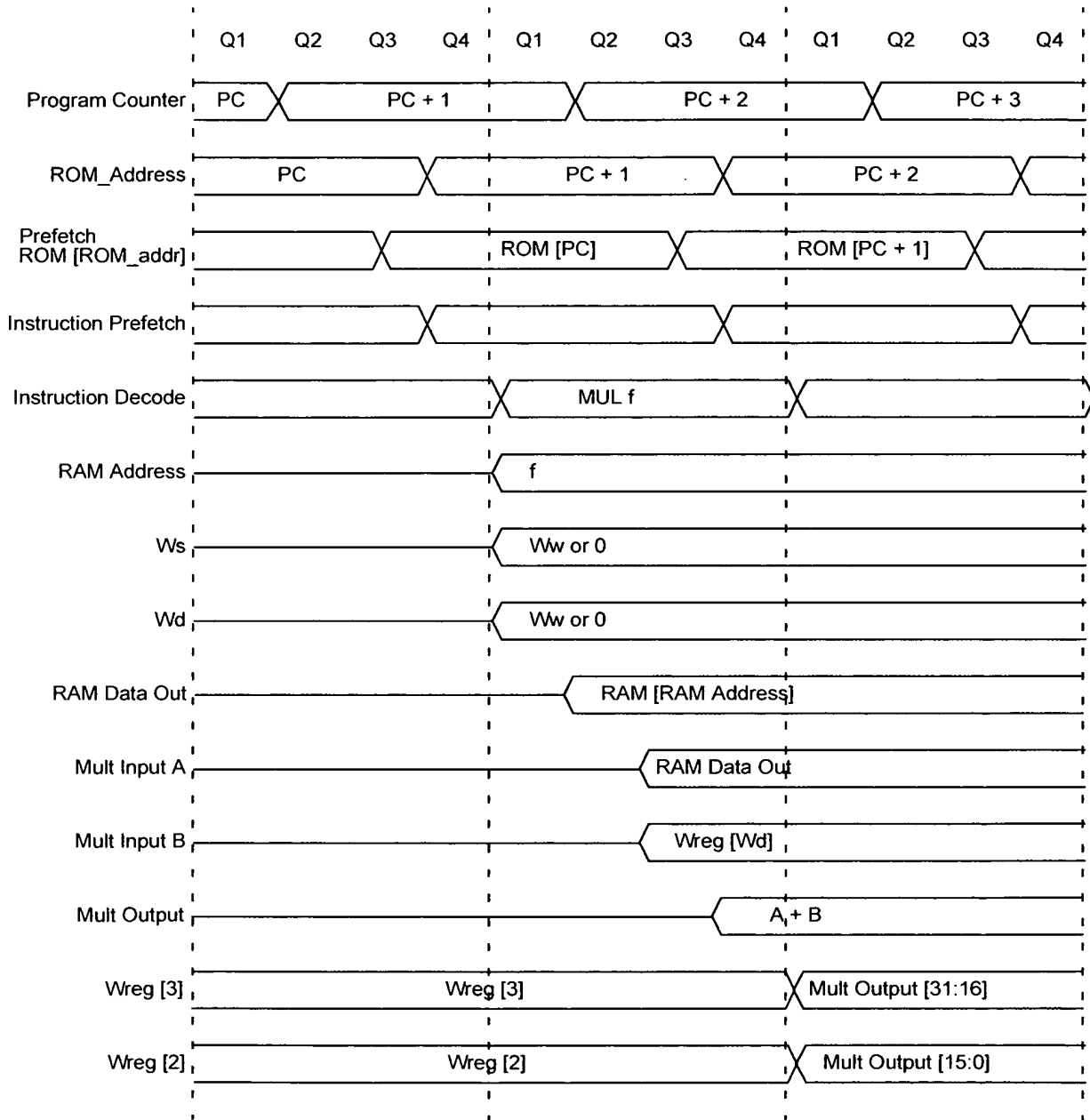


Figure 107

**Figure 108**

**Figure 109**

**Figure 110**

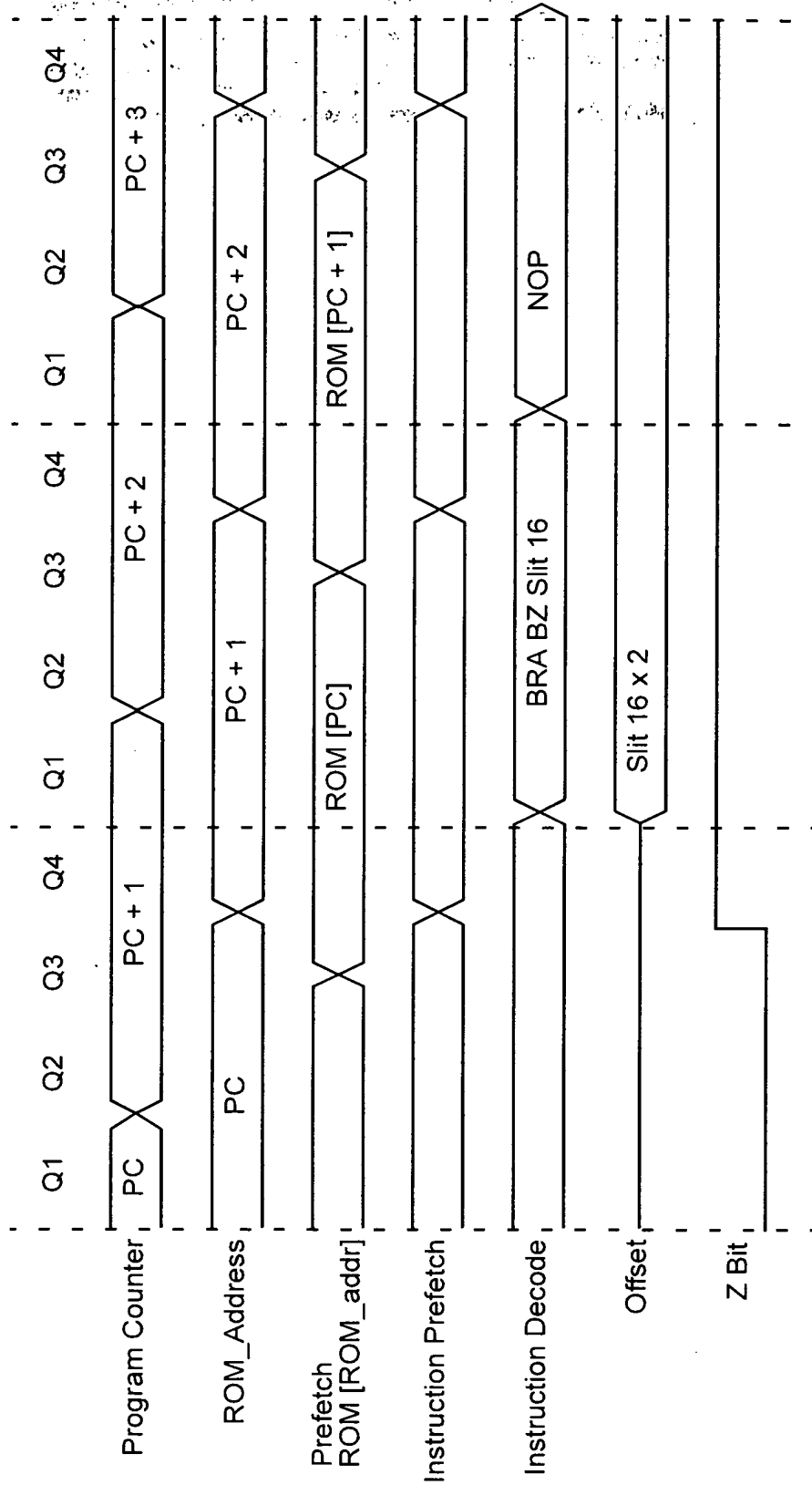


Figure 111

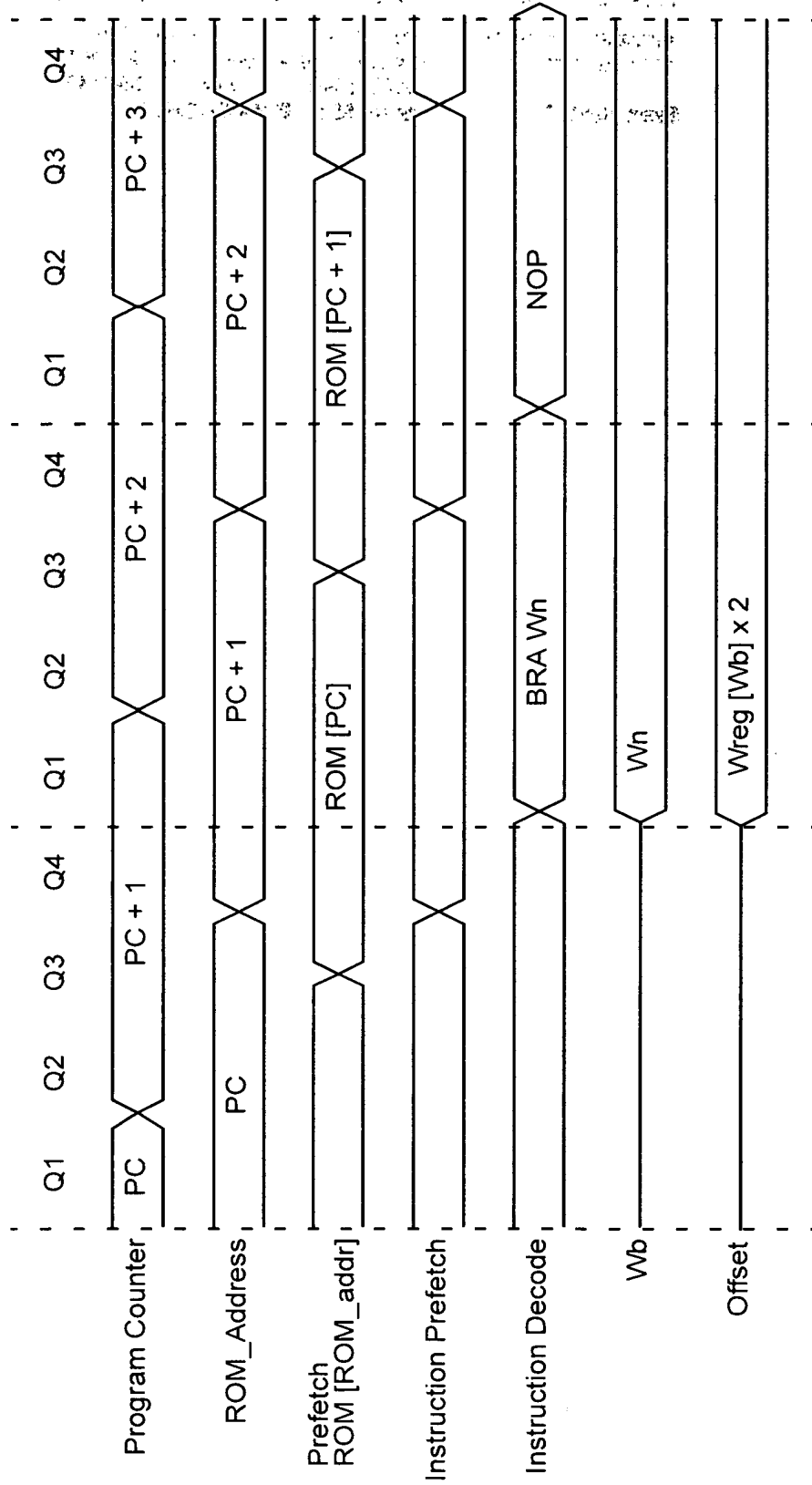


Figure 112

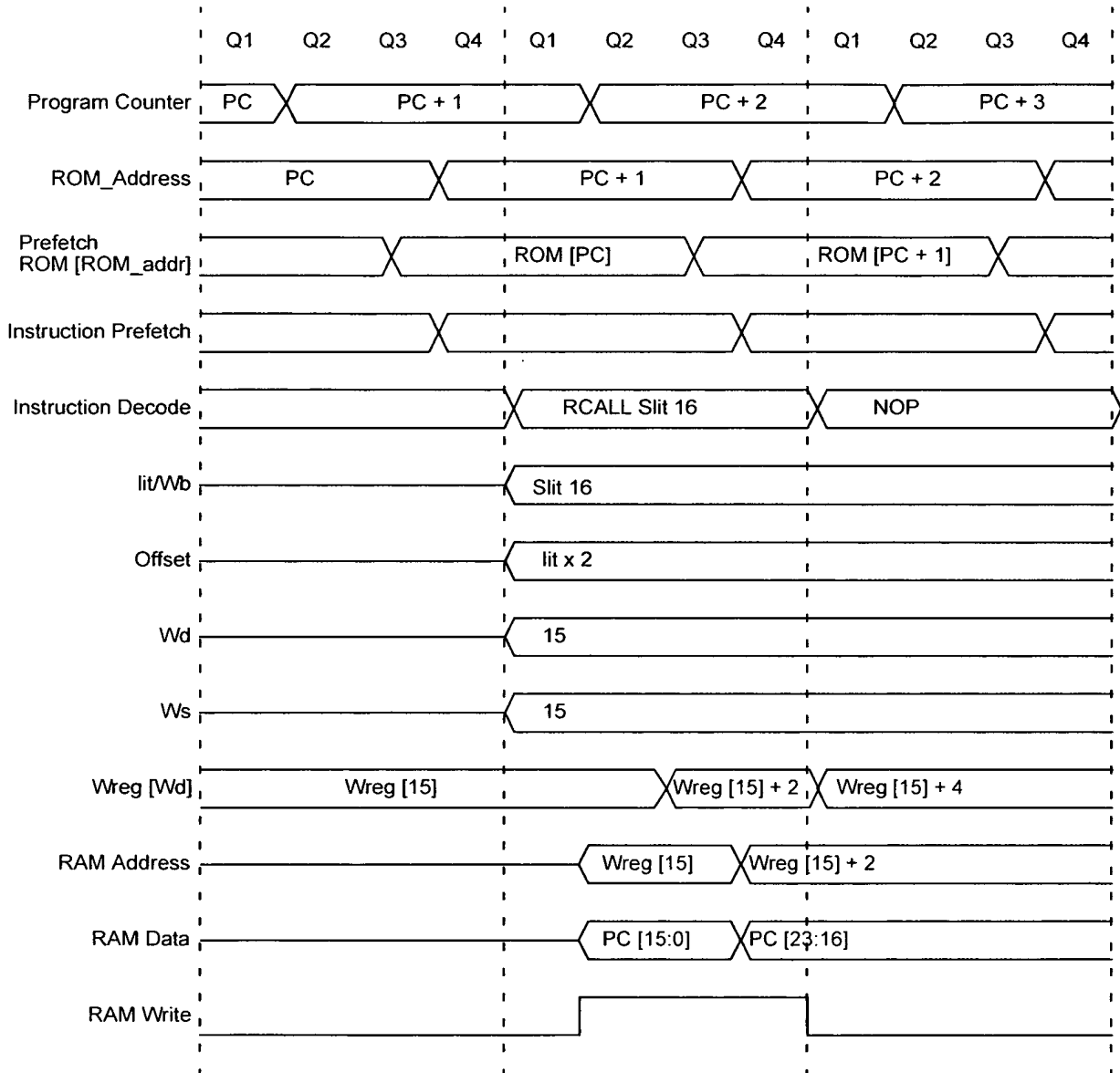
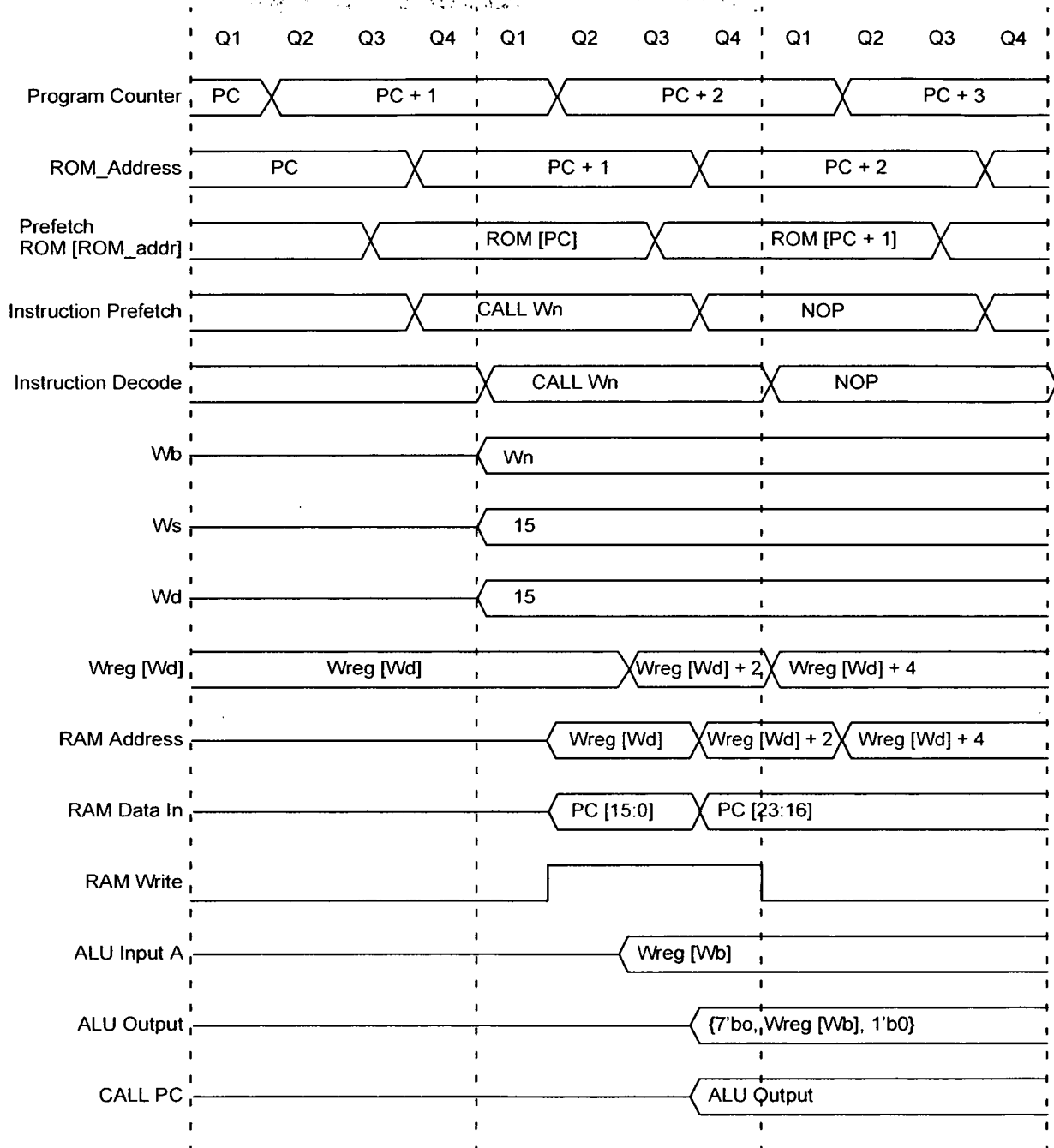
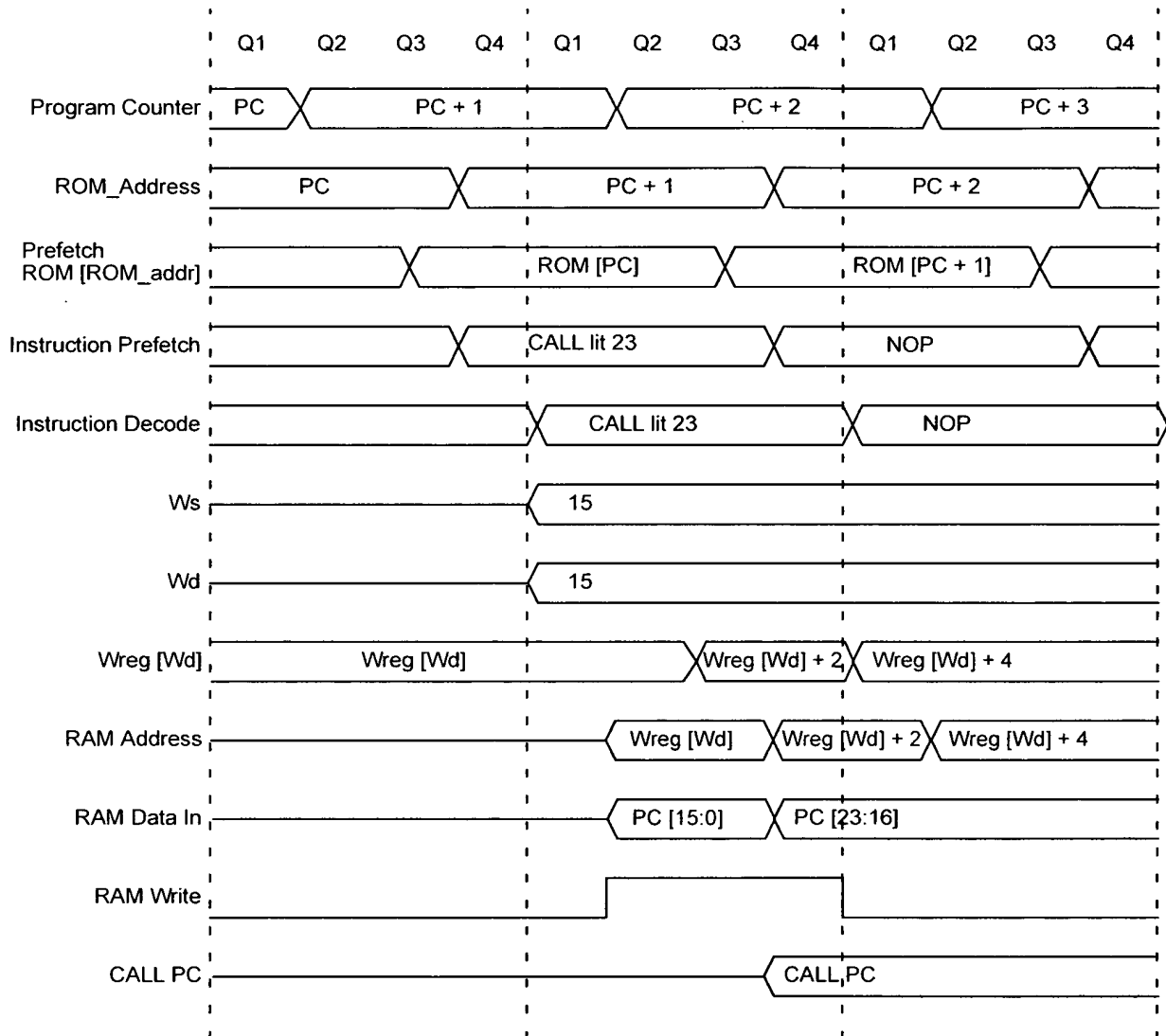


Figure 113

**Figure 114**

**Figure 115**

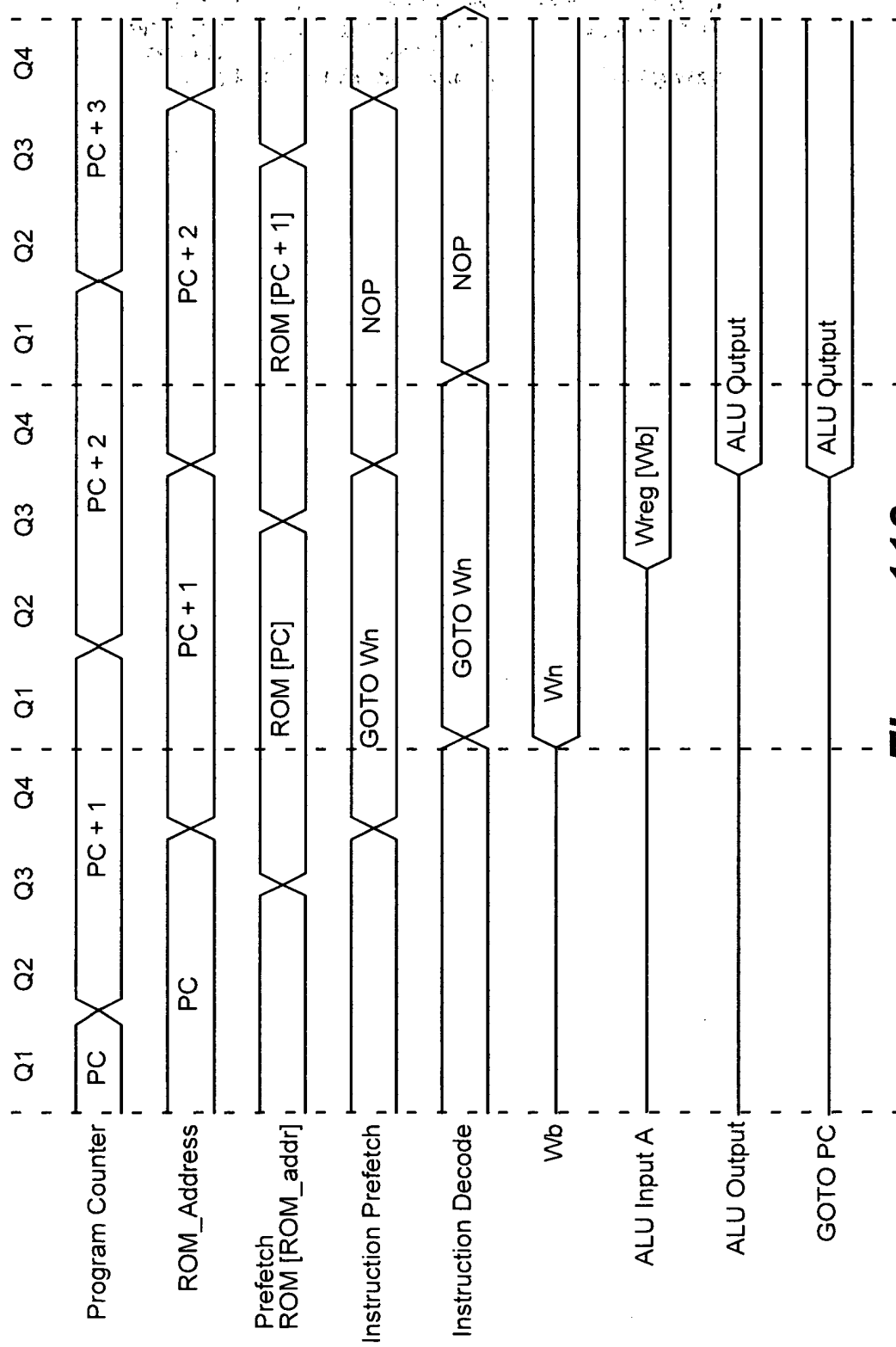


Figure 116

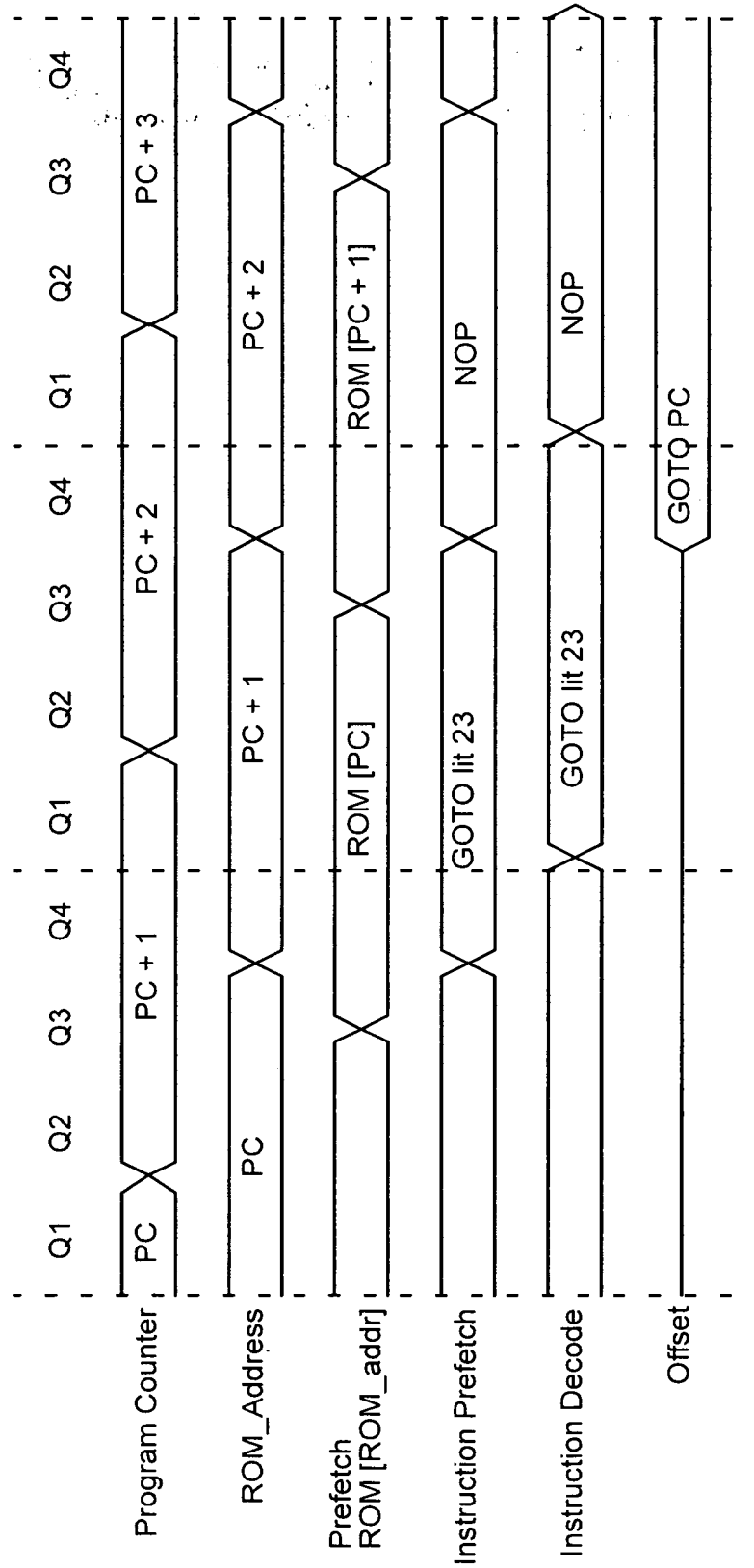
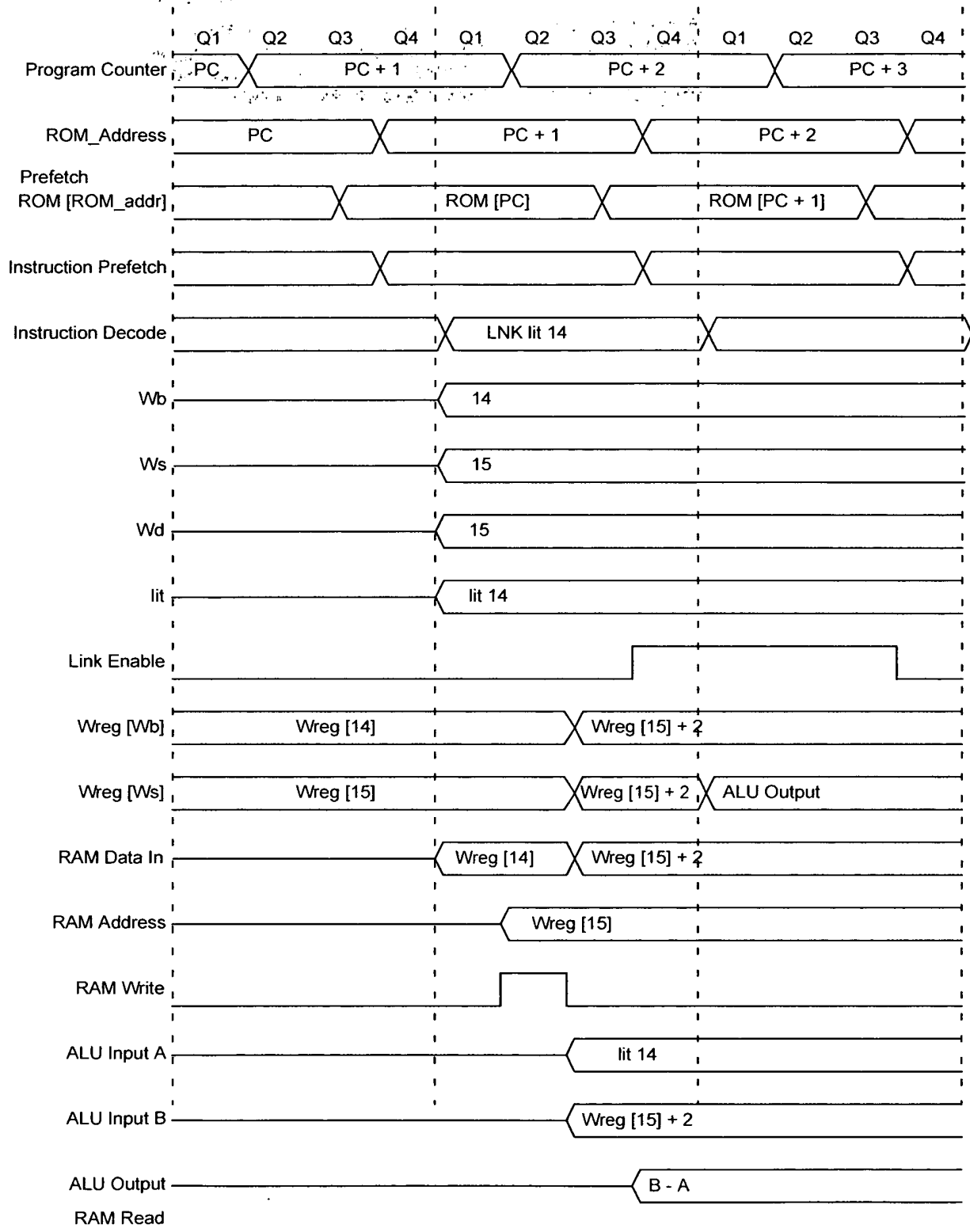


Figure 117

**Figure 118**

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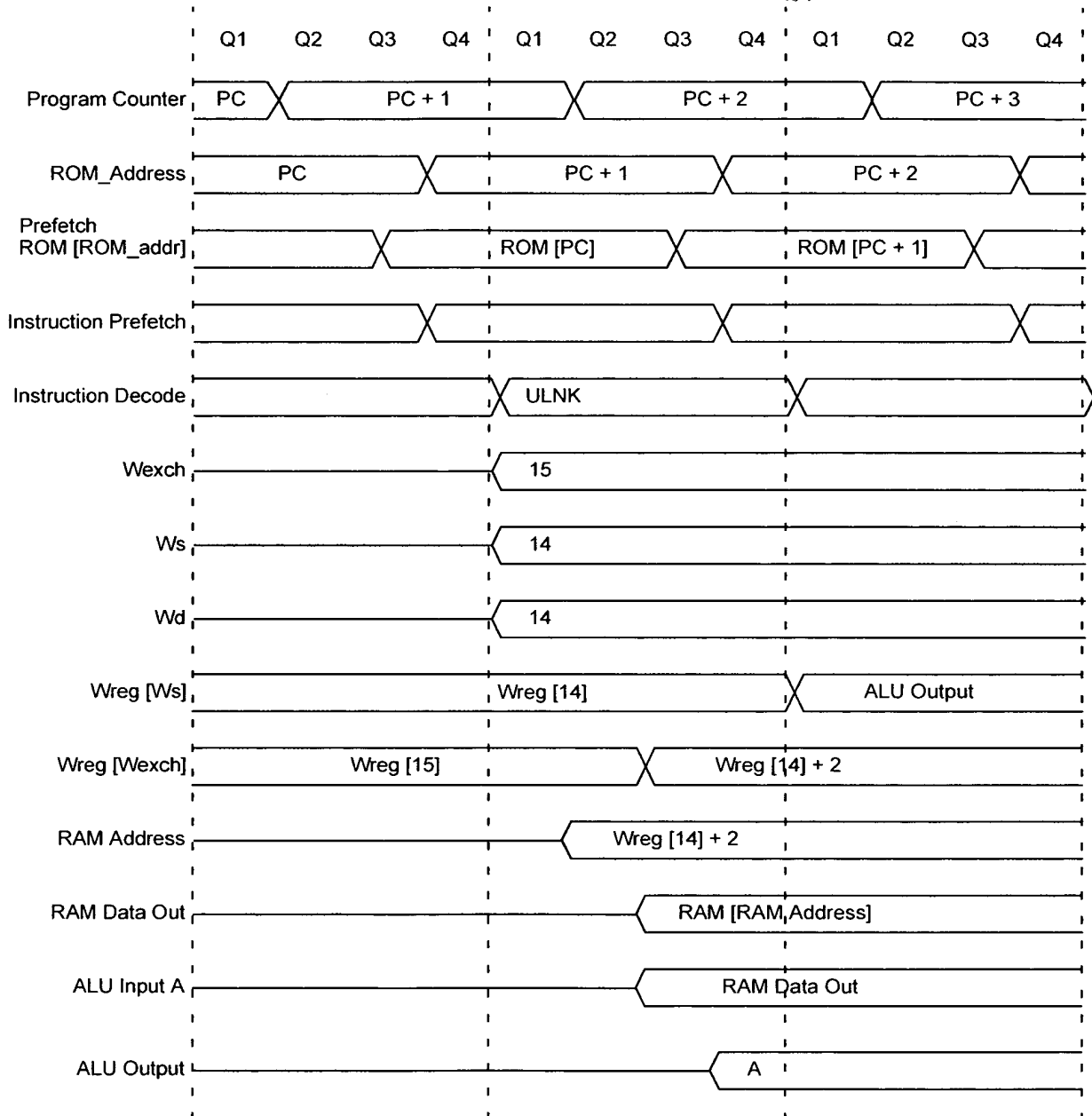


Figure 119

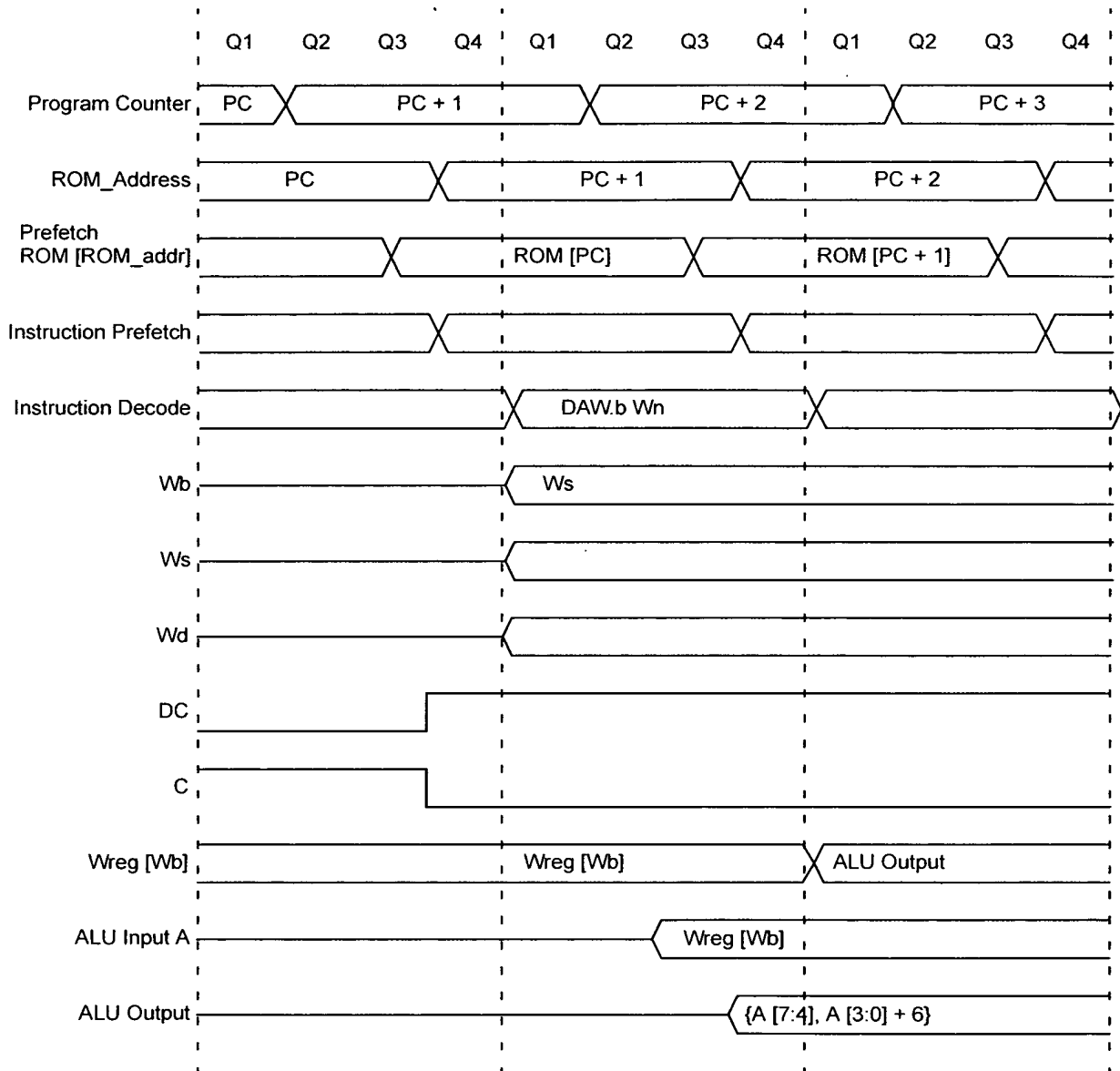


Figure 120

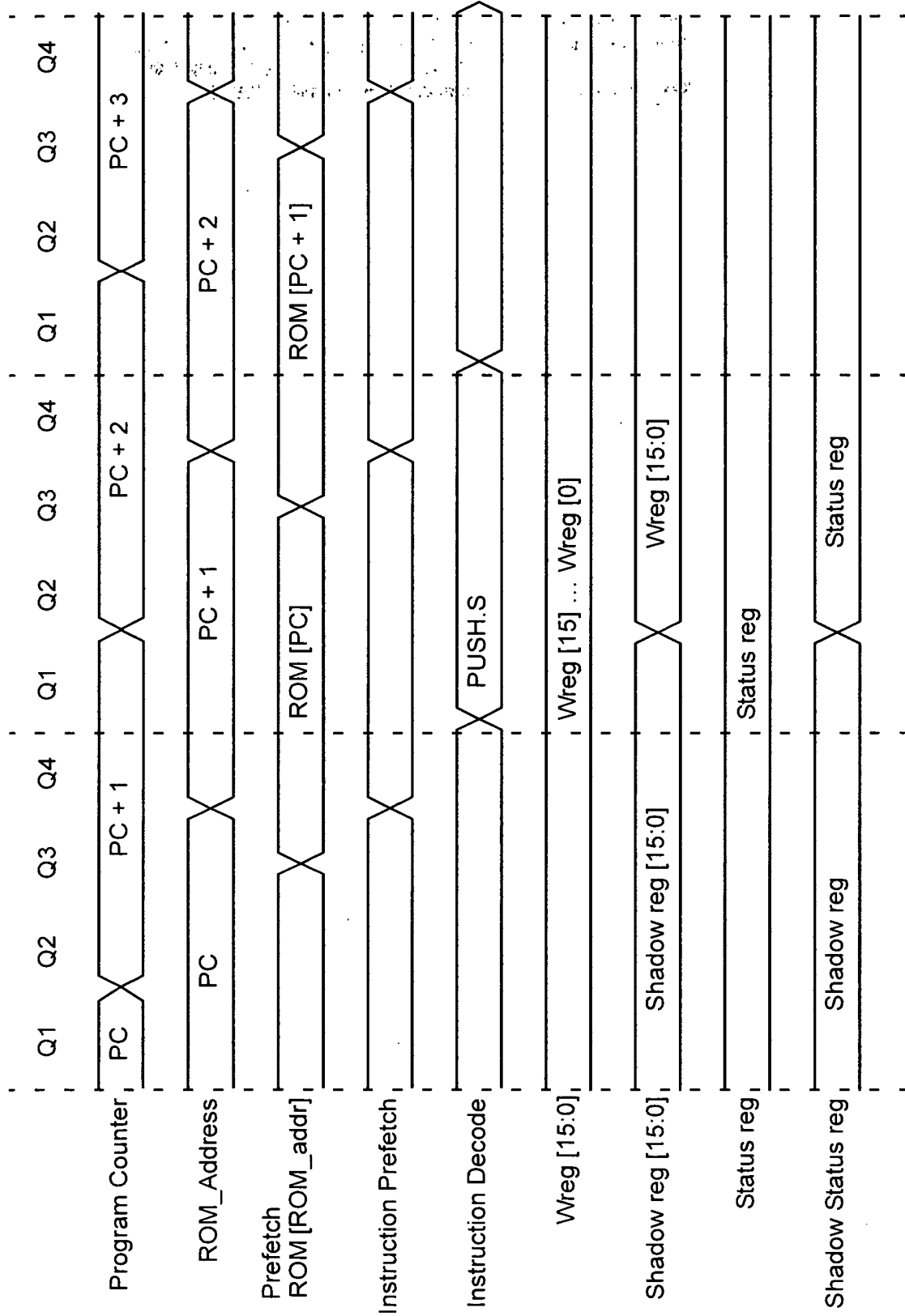


Figure 121

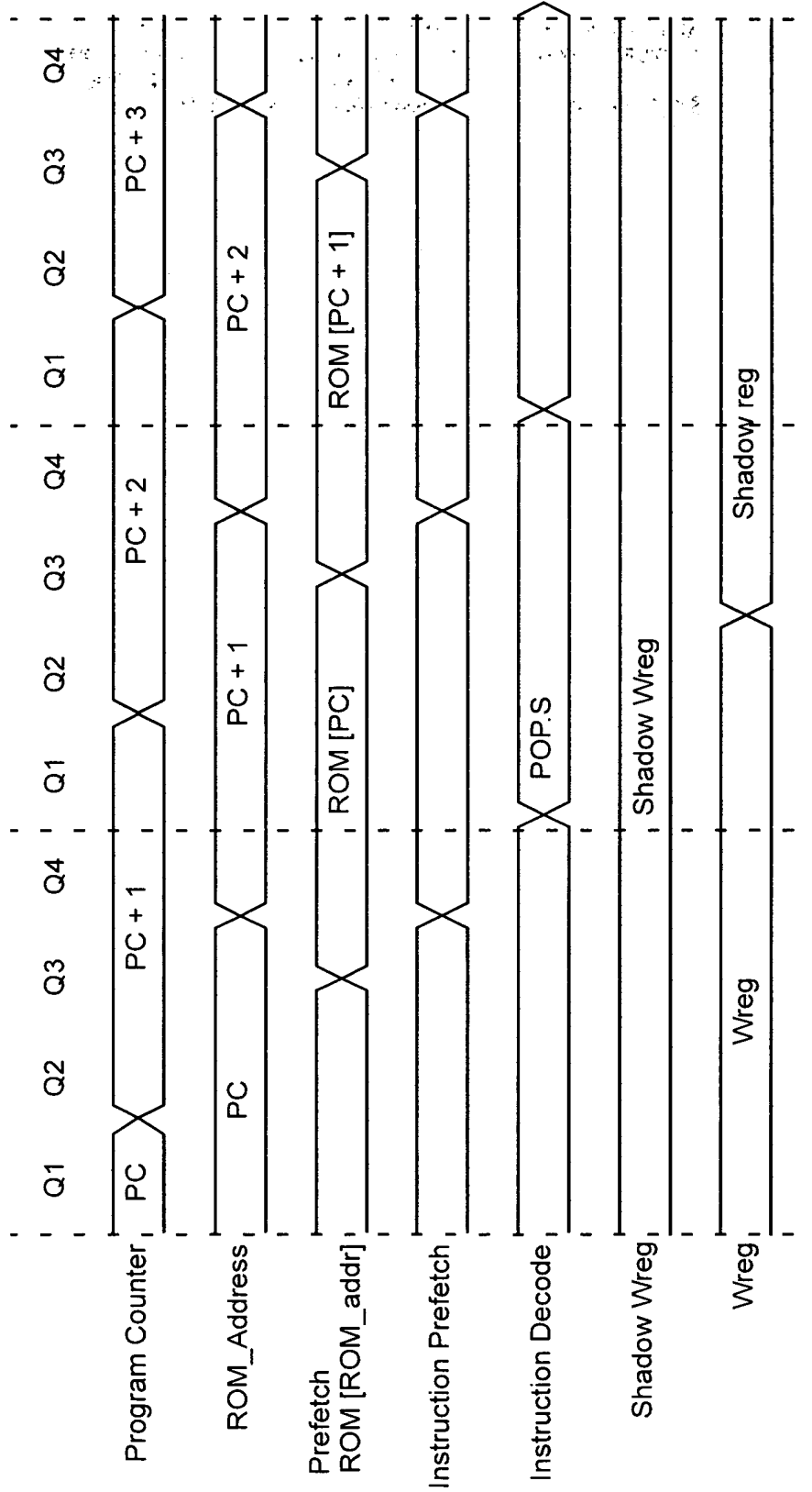
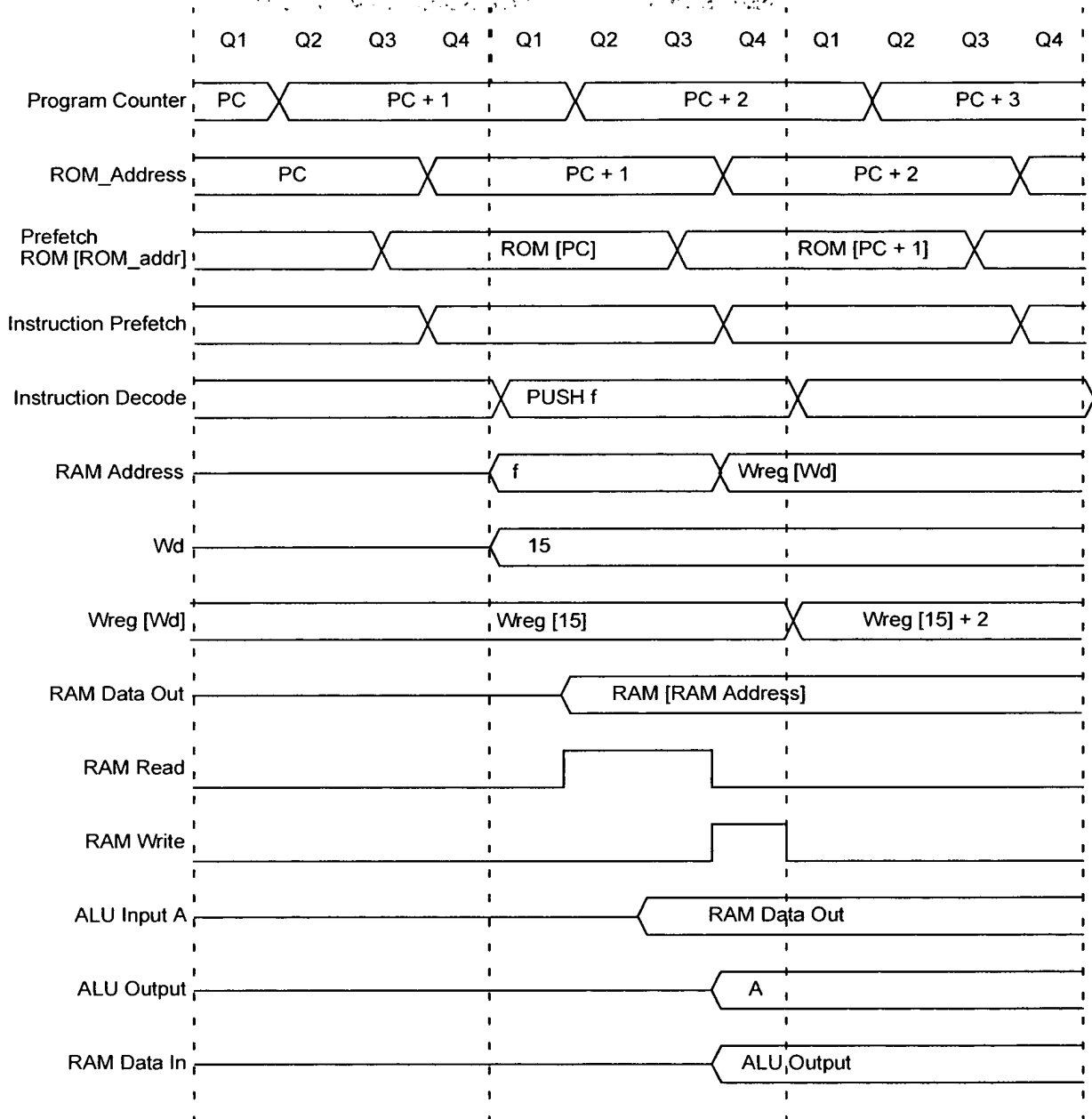


Figure 122

**Figure 123**

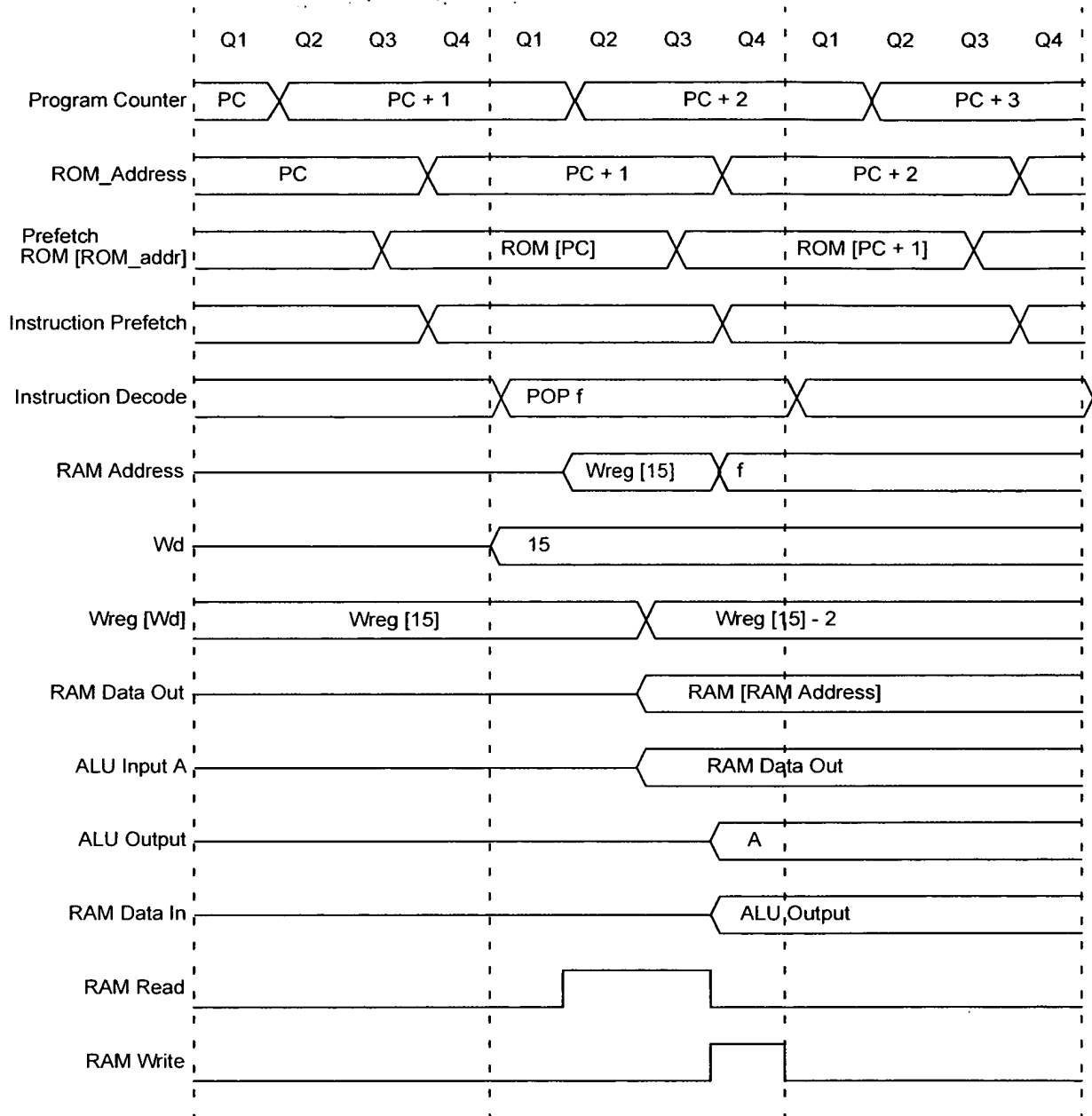
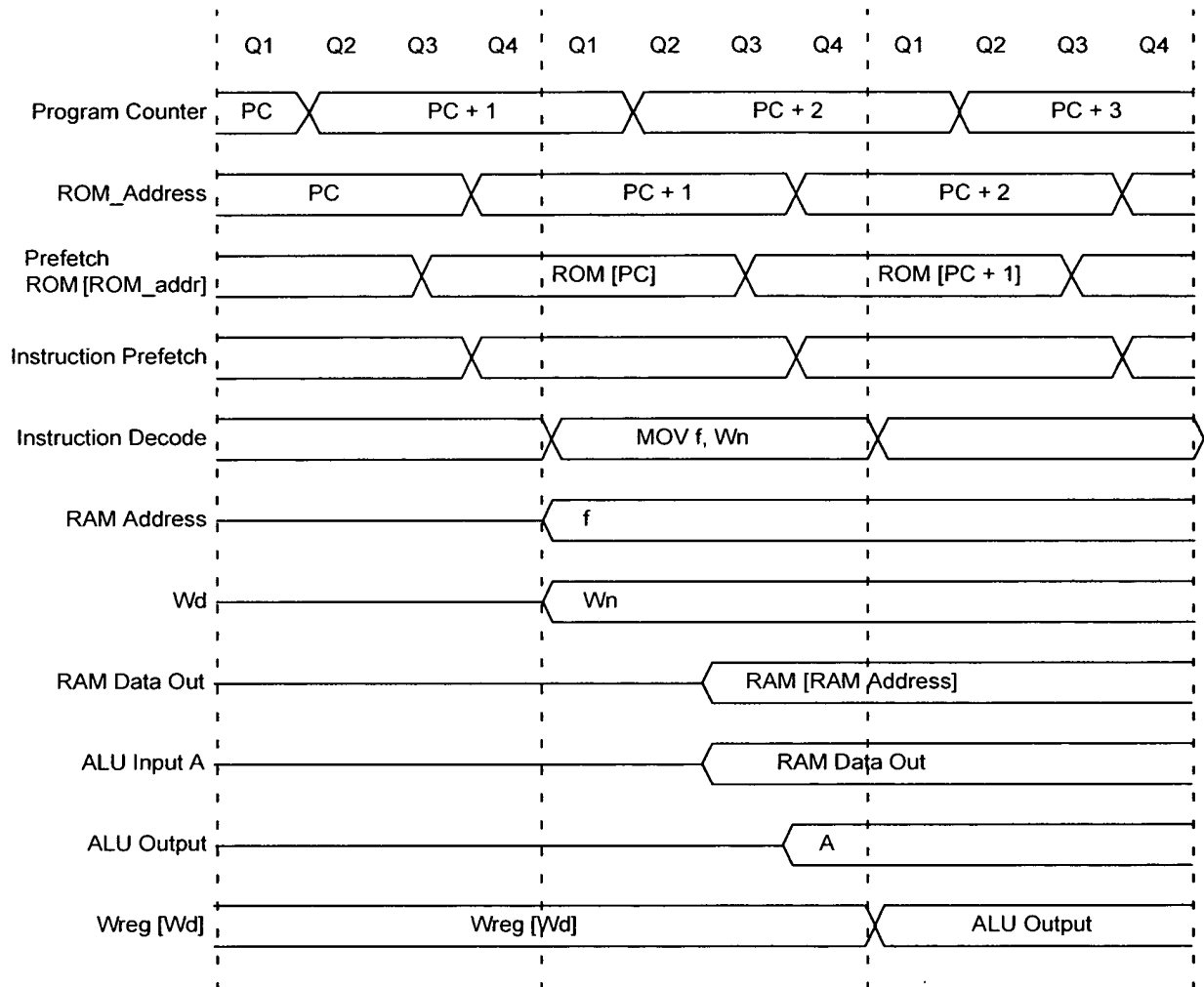
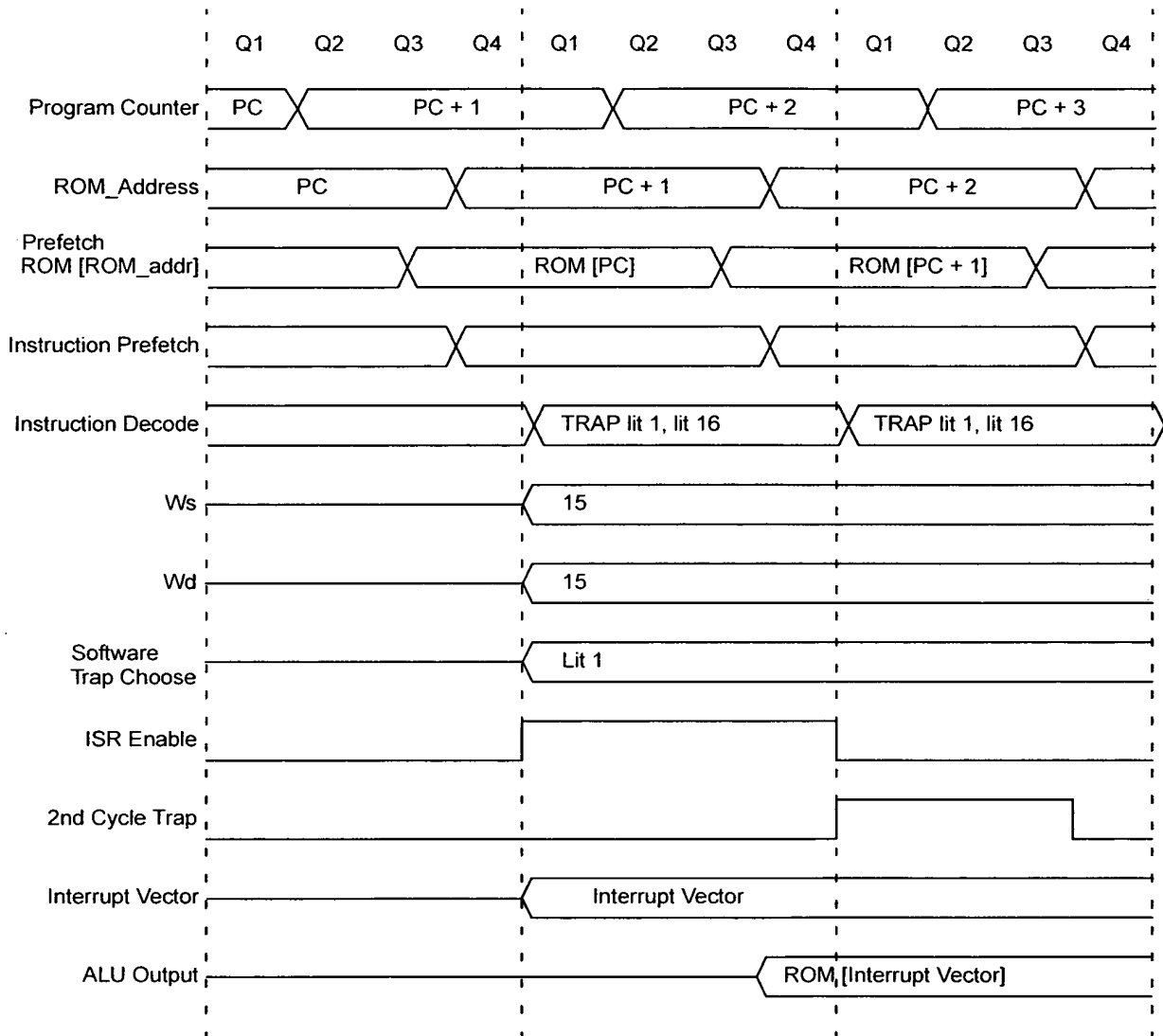


Figure 124

**Figure 125**

**Figure 126**

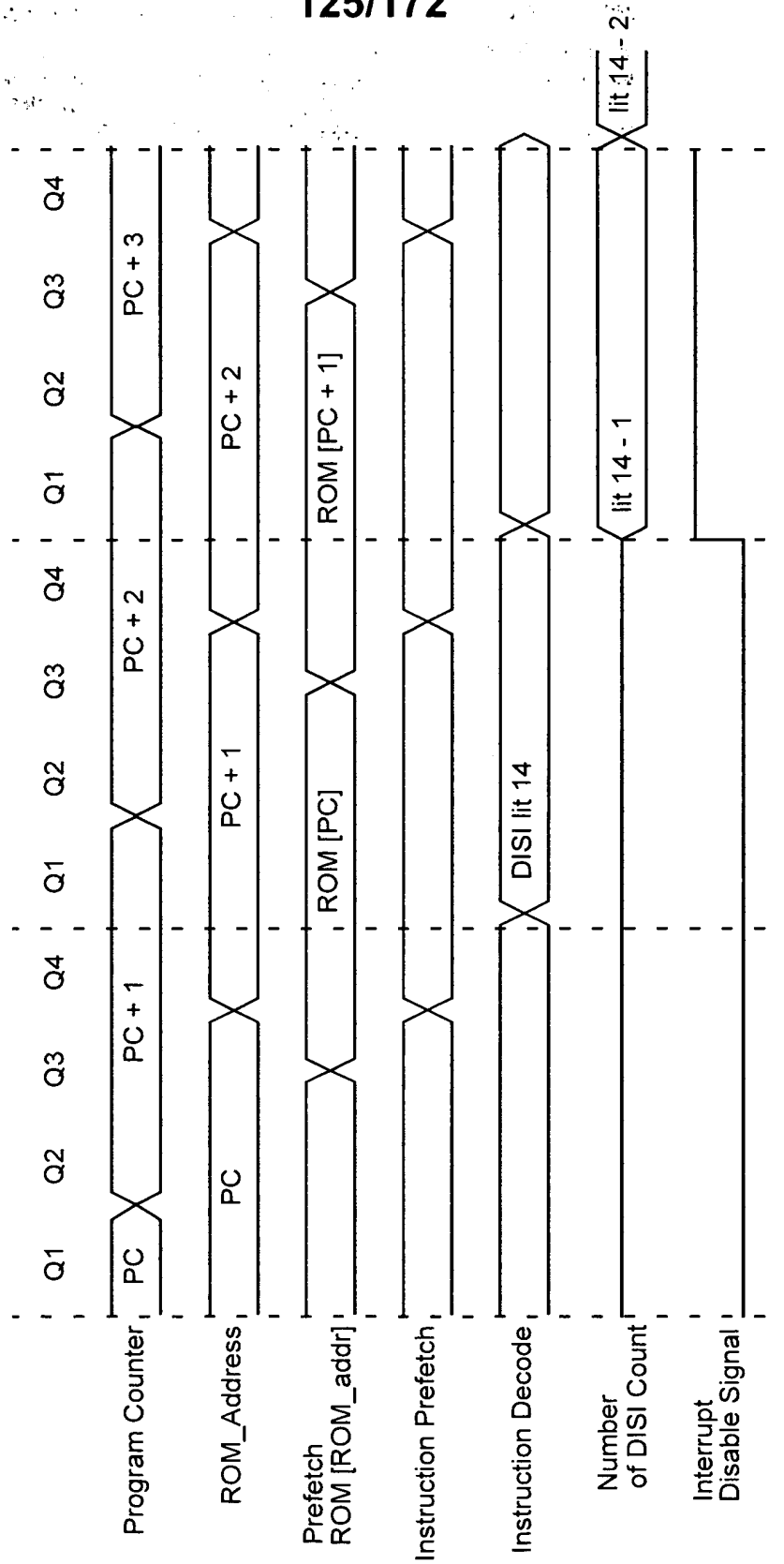
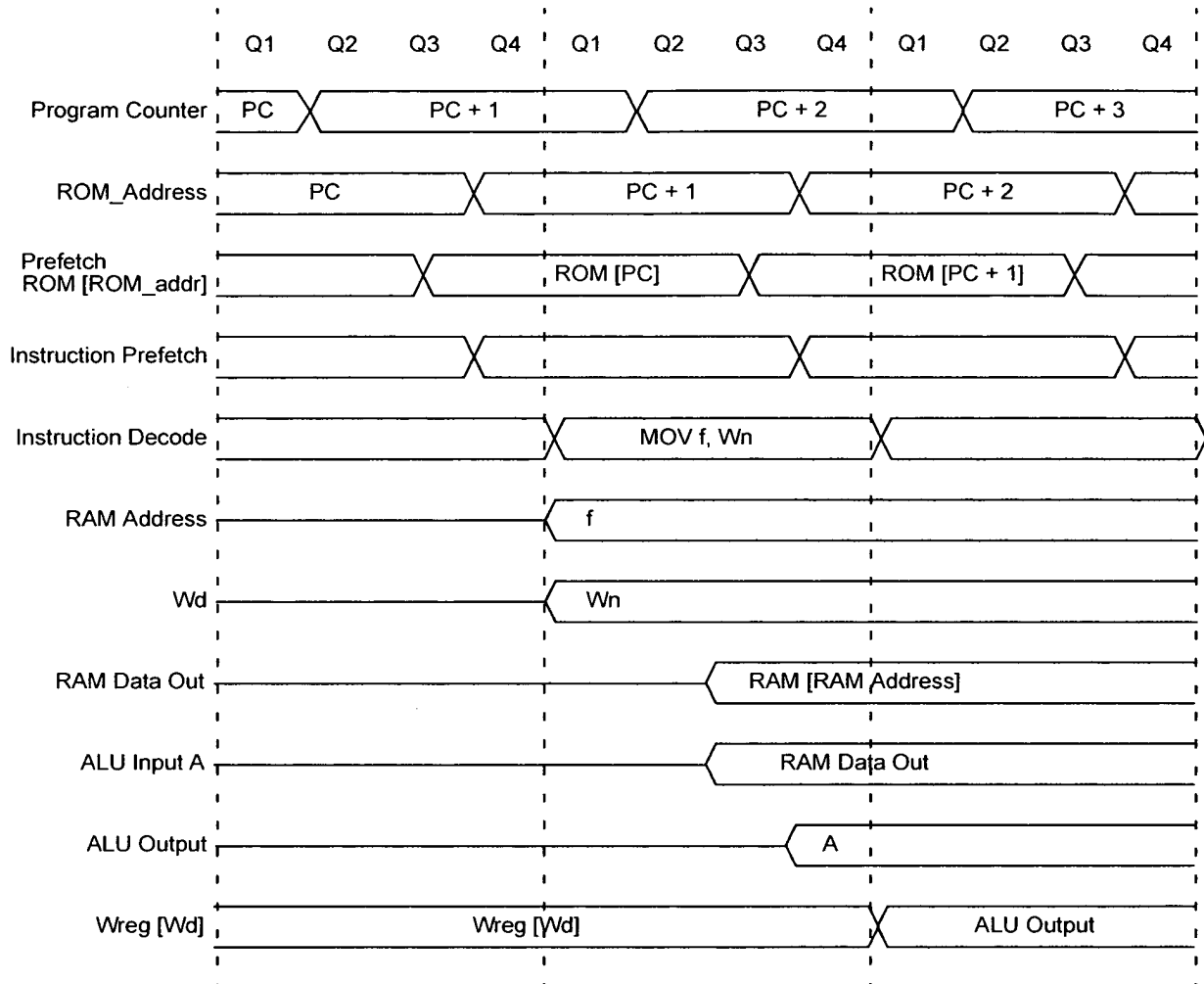


Figure 127

**Figure 128**

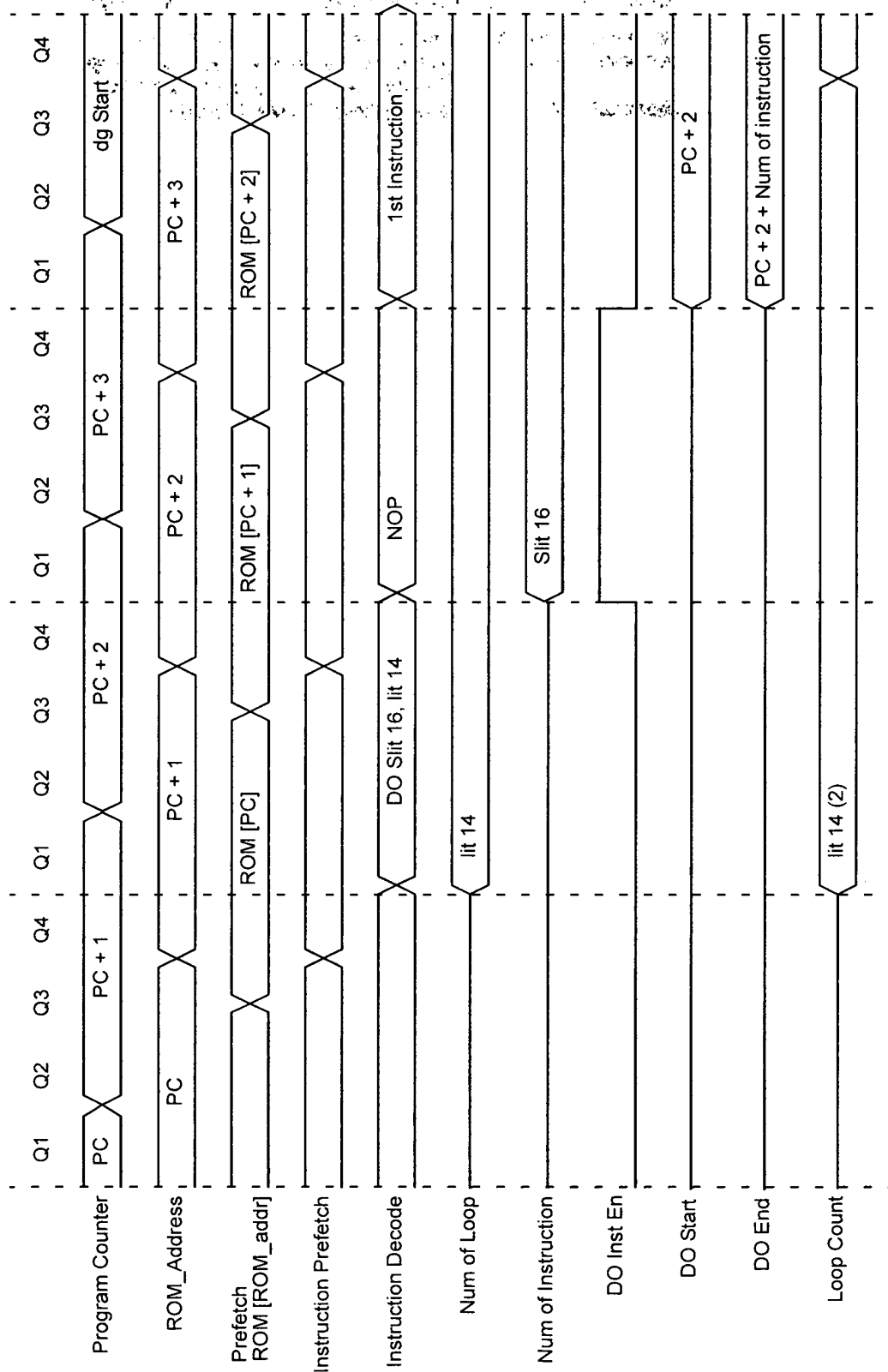


Figure 129

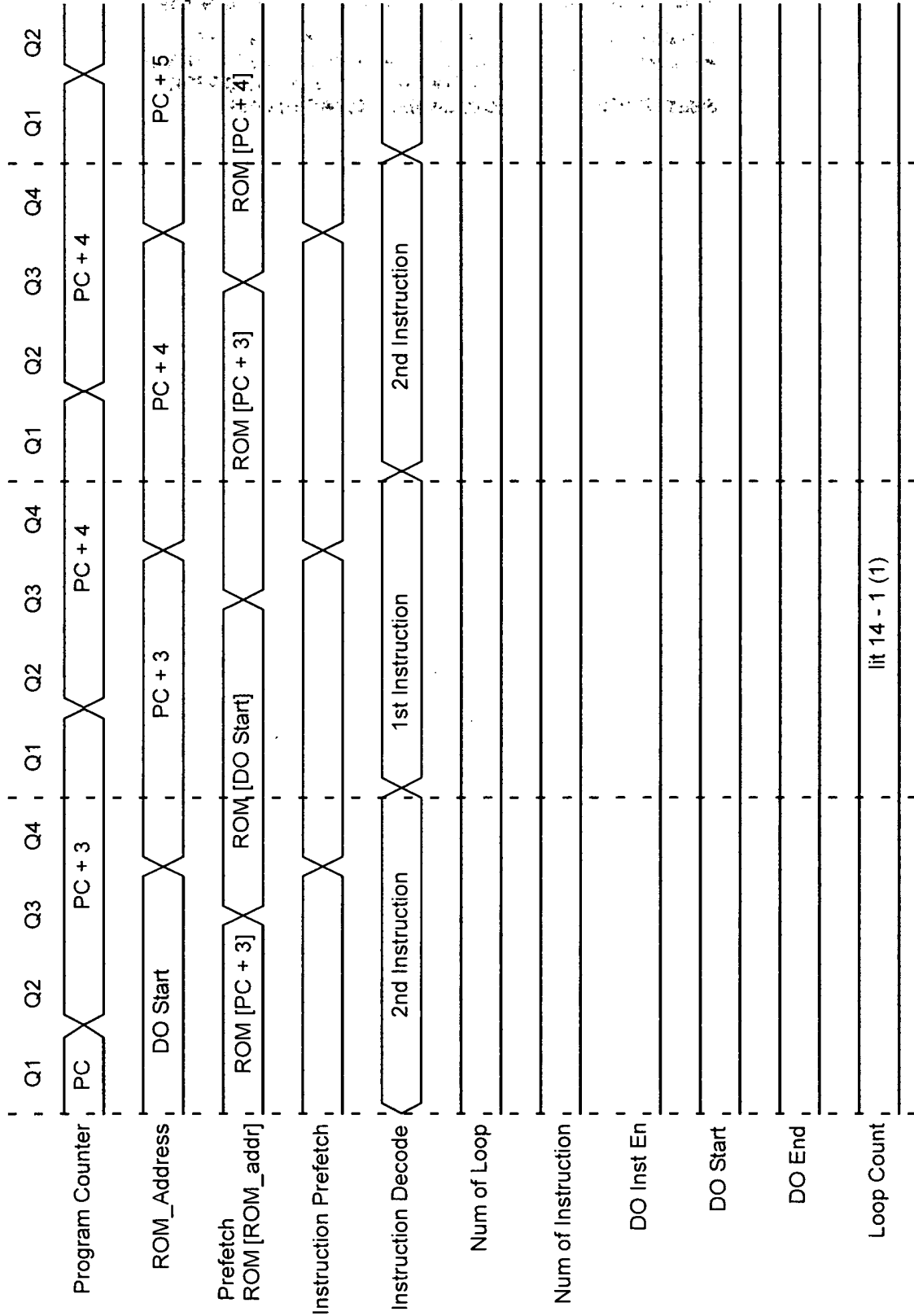


Figure 130

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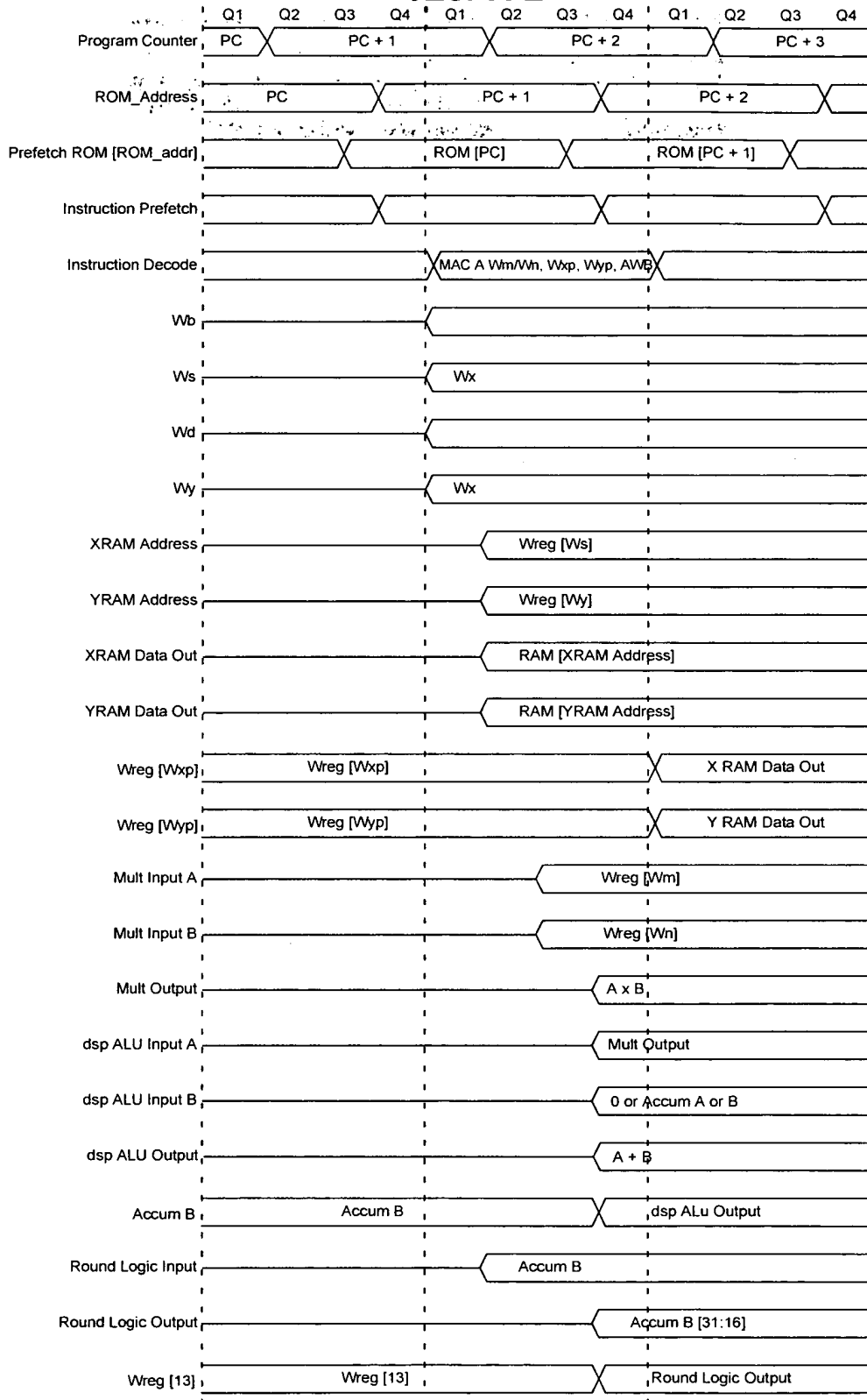


Figure 131

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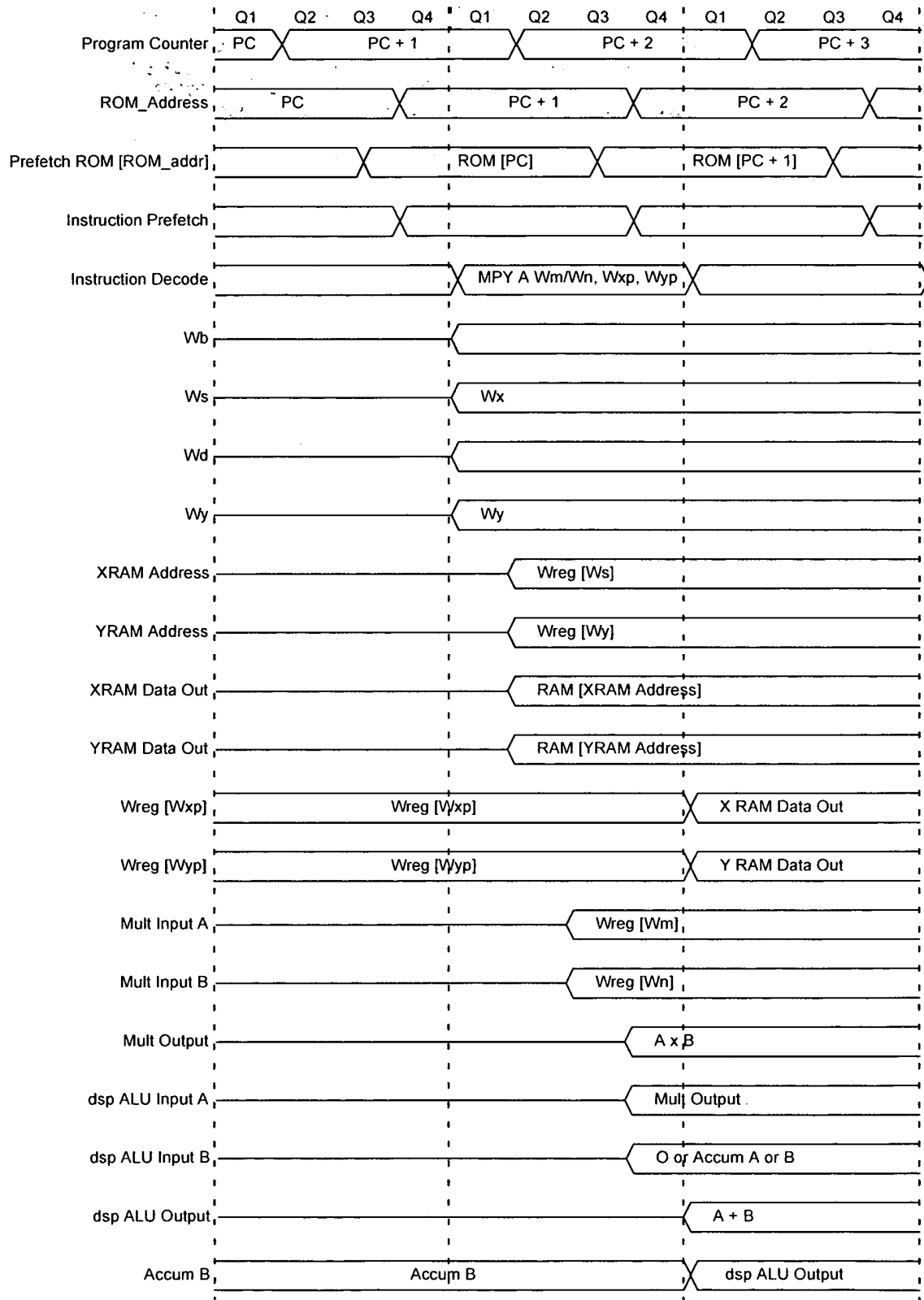


Figure 132

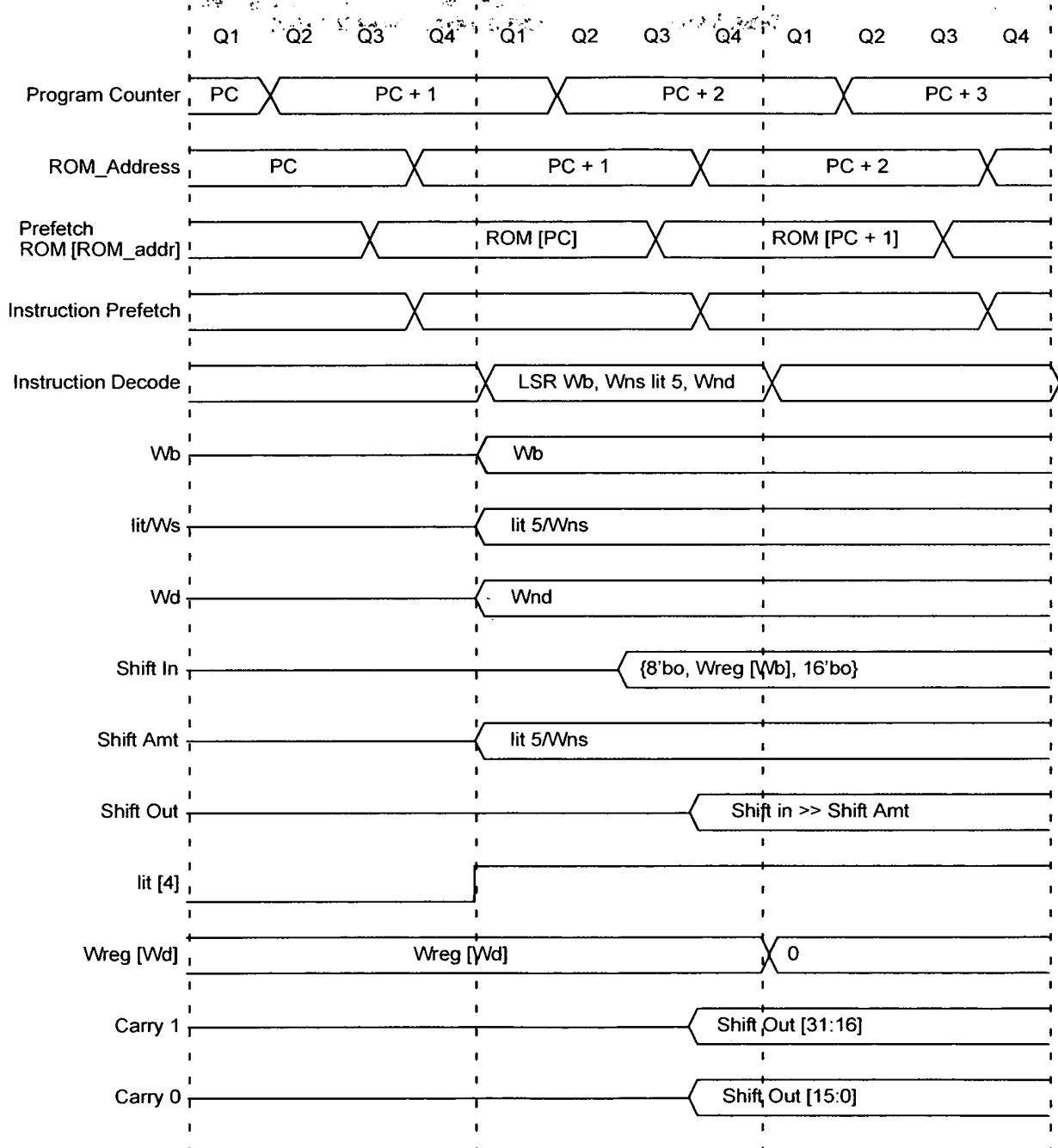


Figure 133

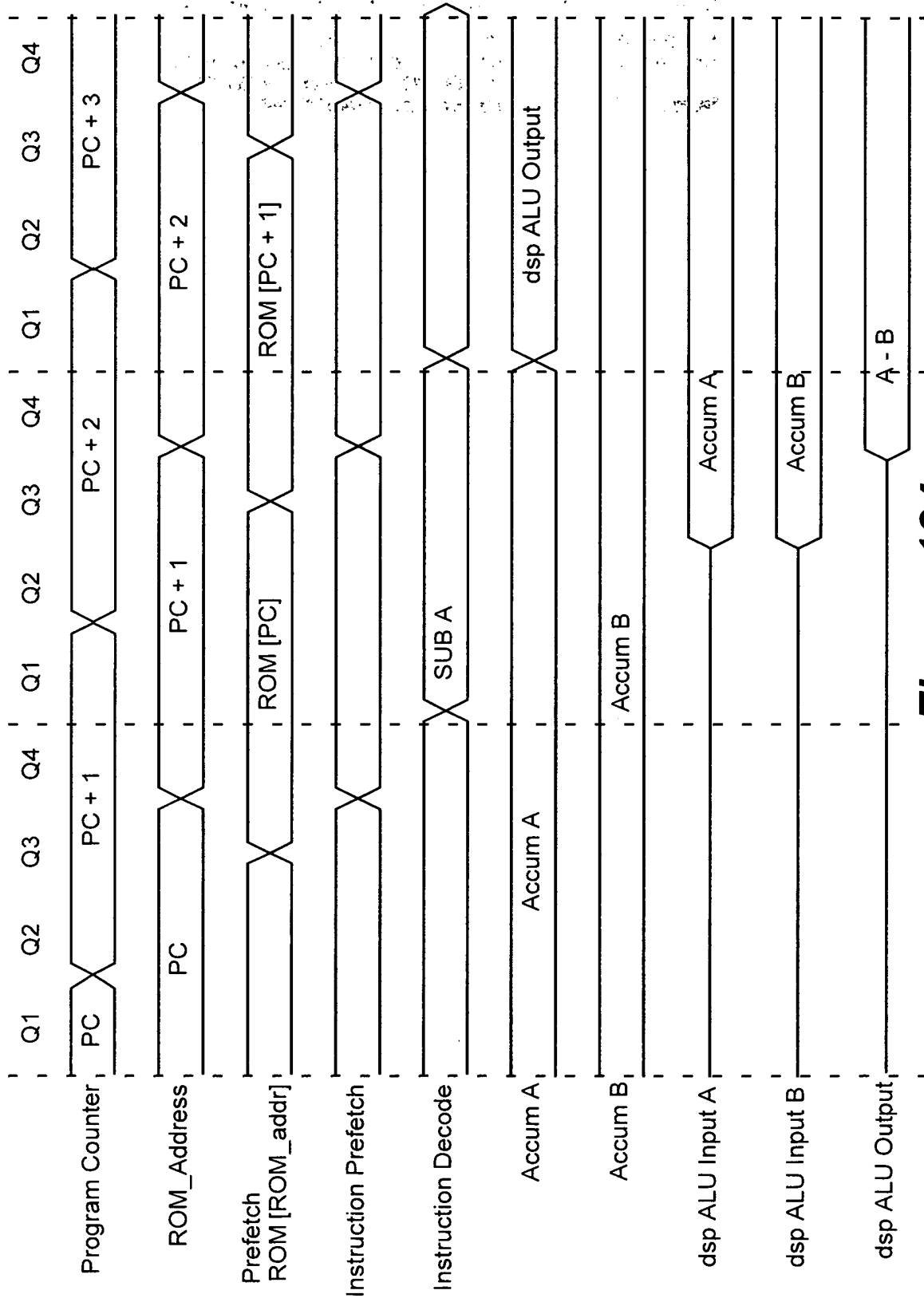
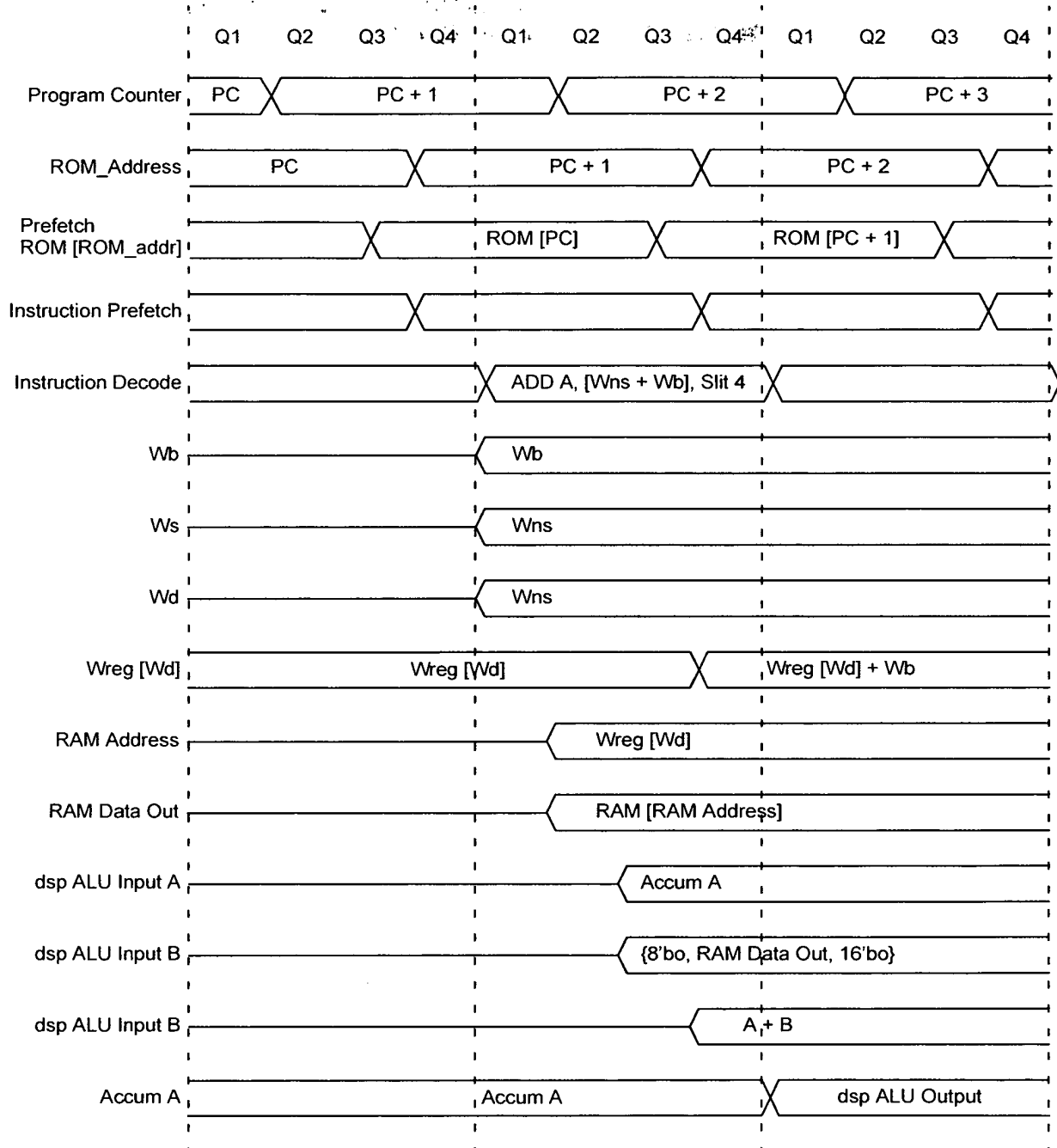


Figure 134

**Figure 135**

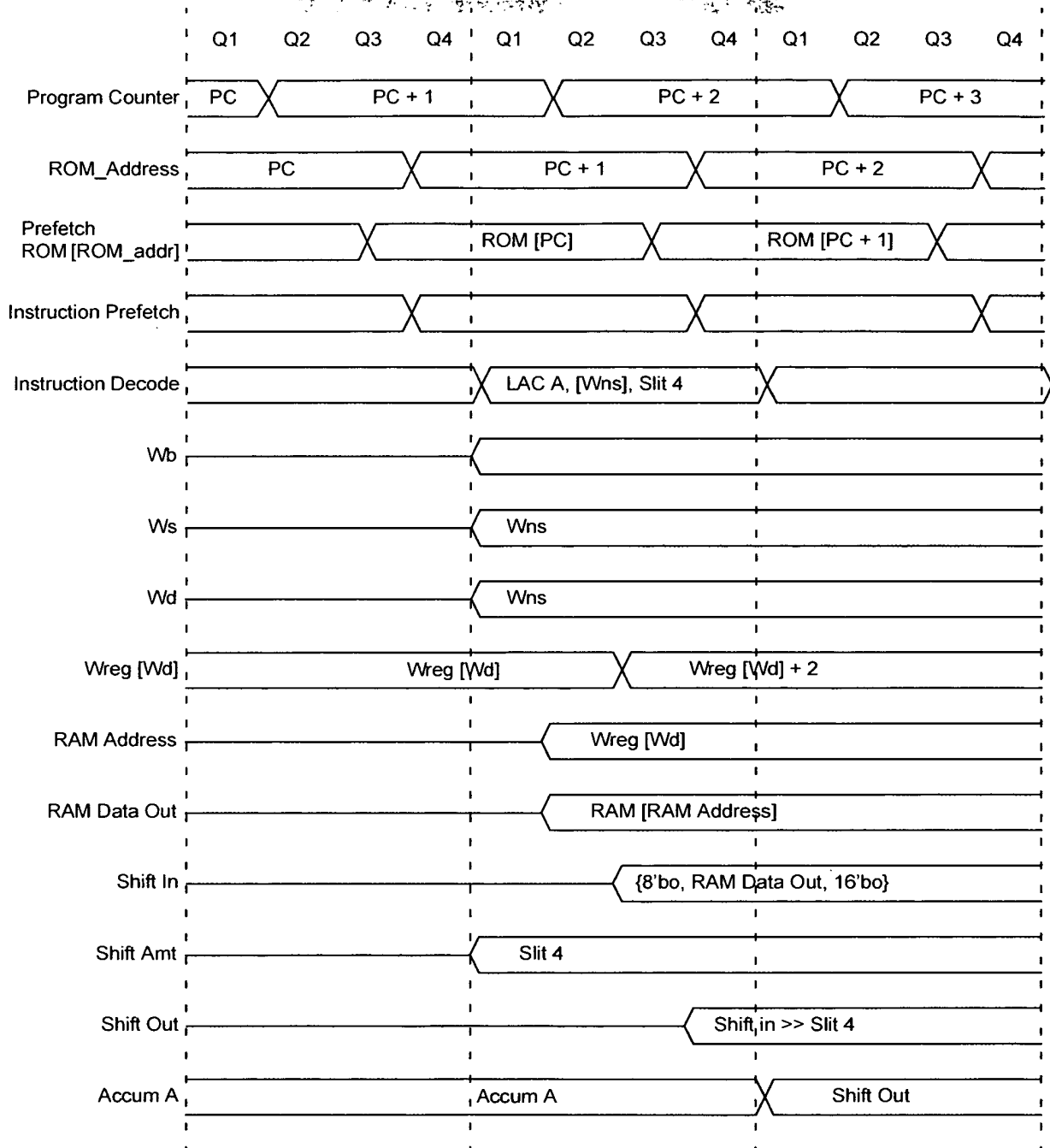


Figure 136

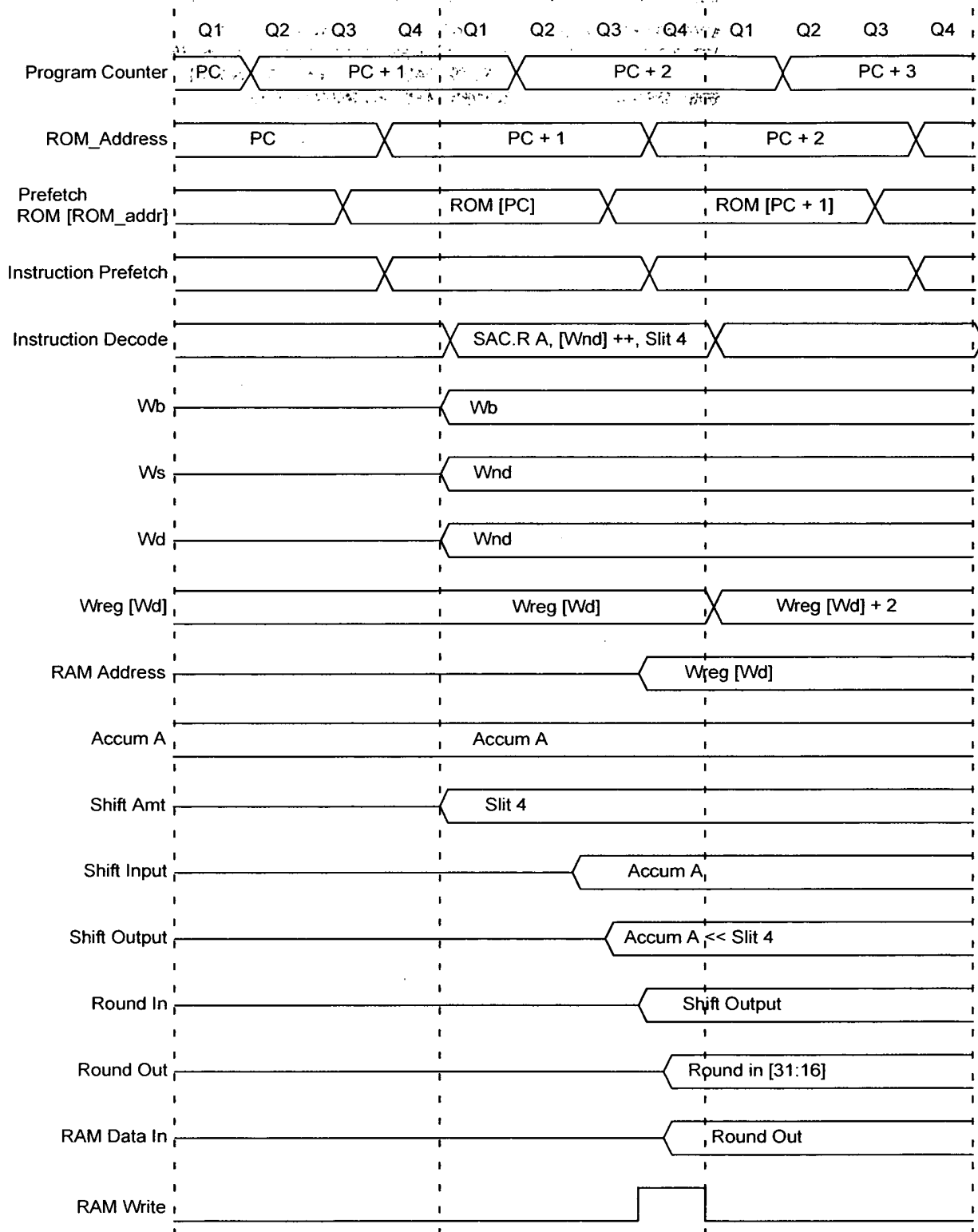


Figure 137

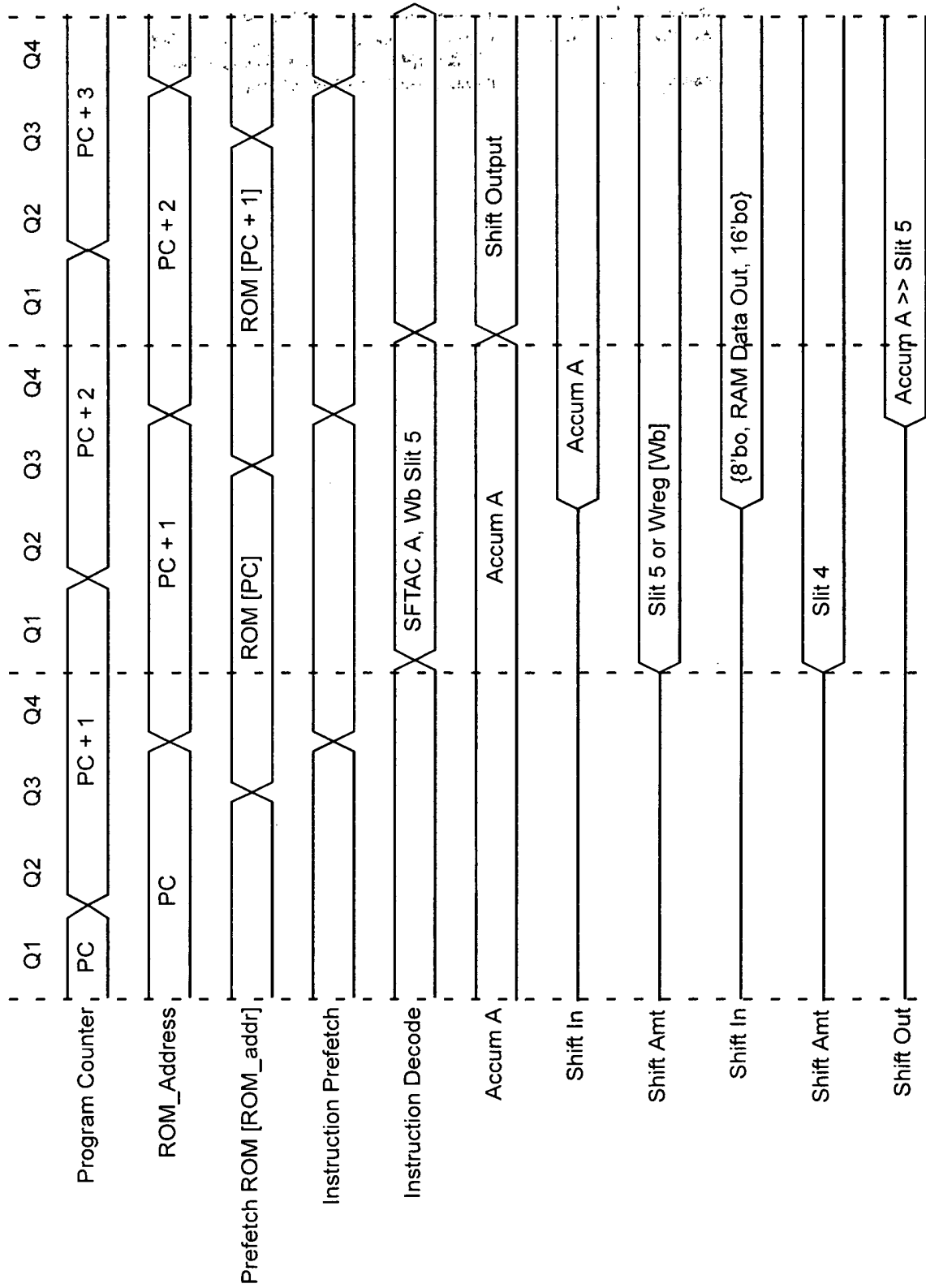
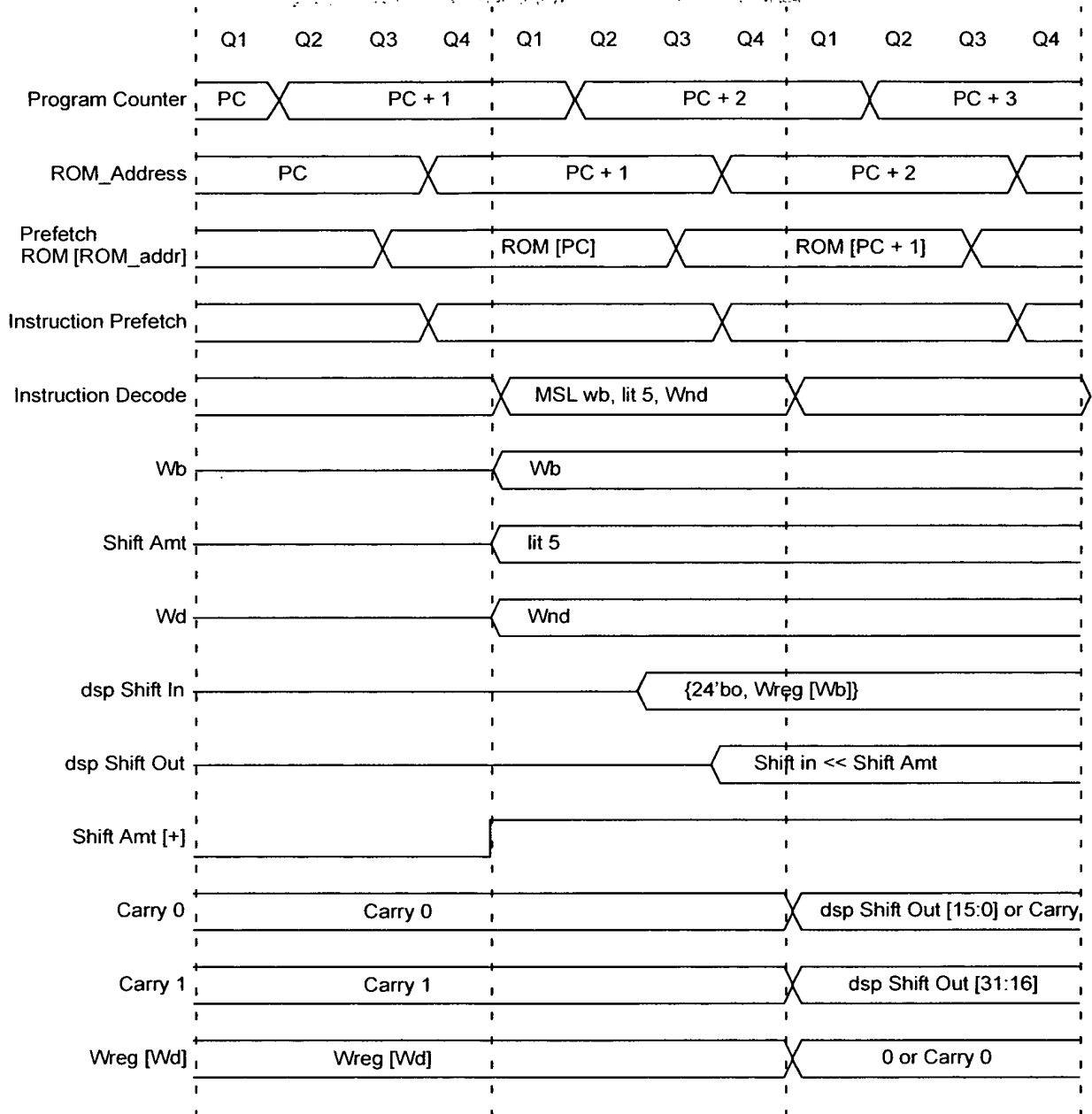
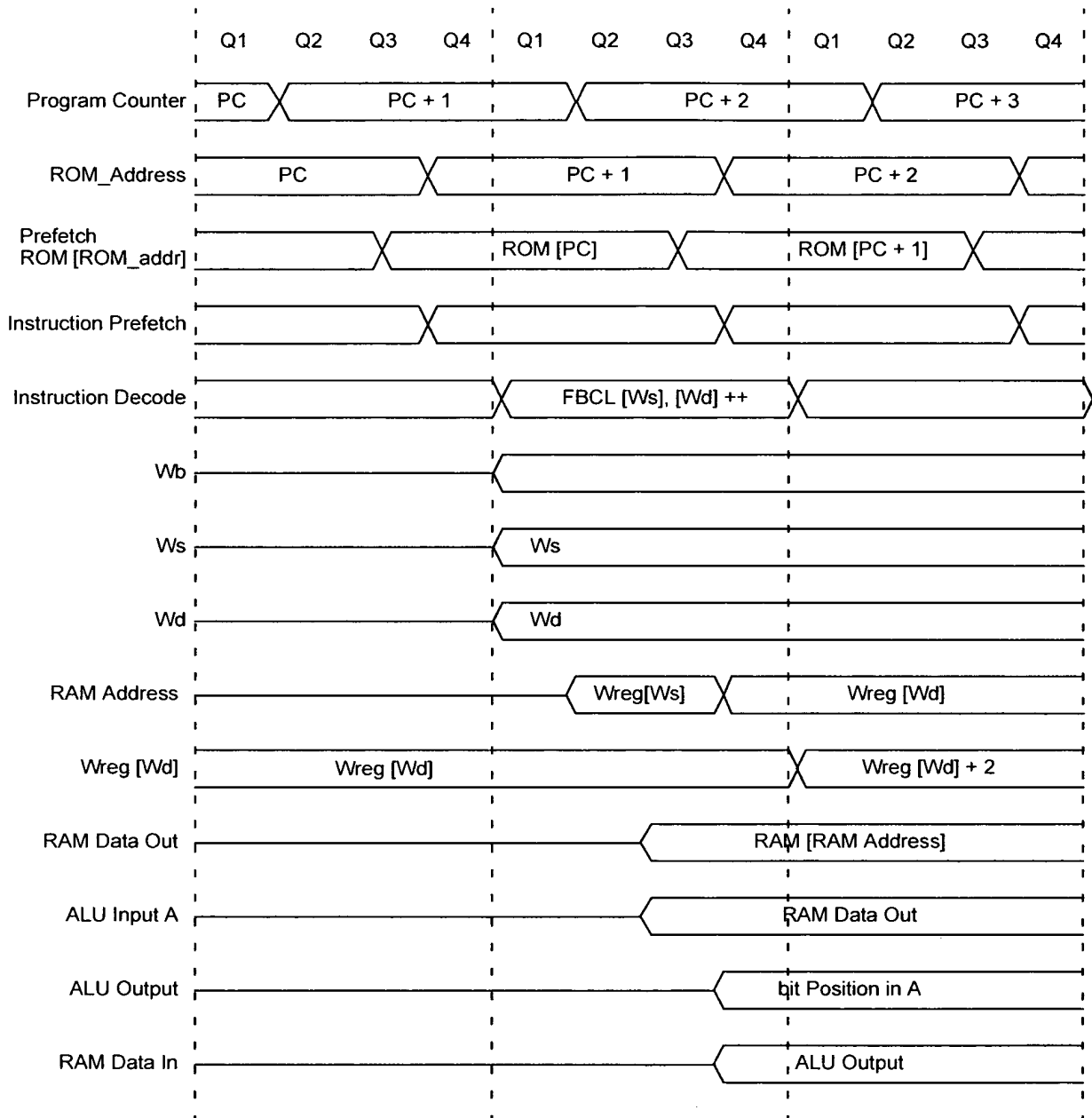


Figure 138



Figure 139

**Figure 140**

**Figure 141**

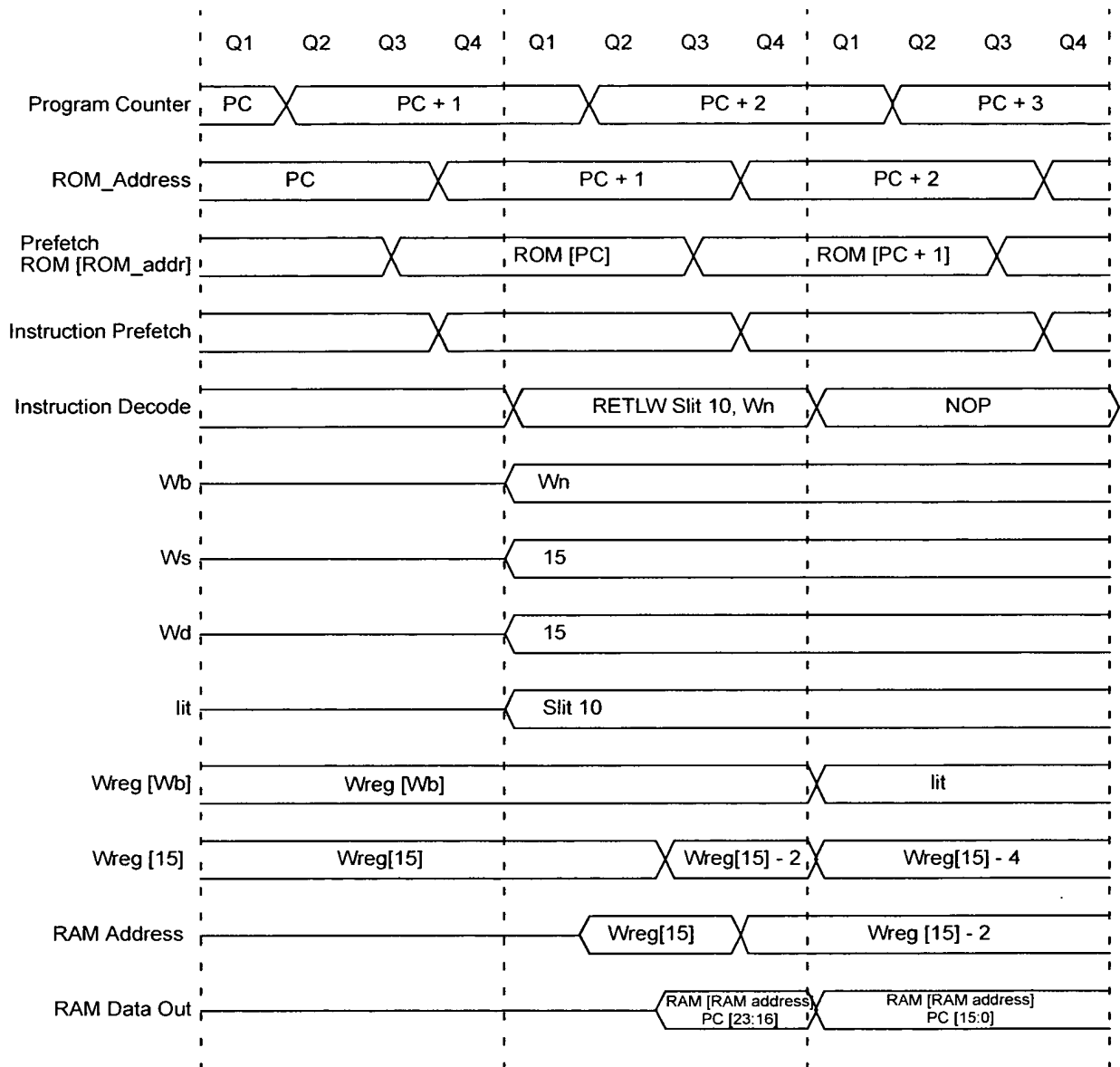


Figure 142

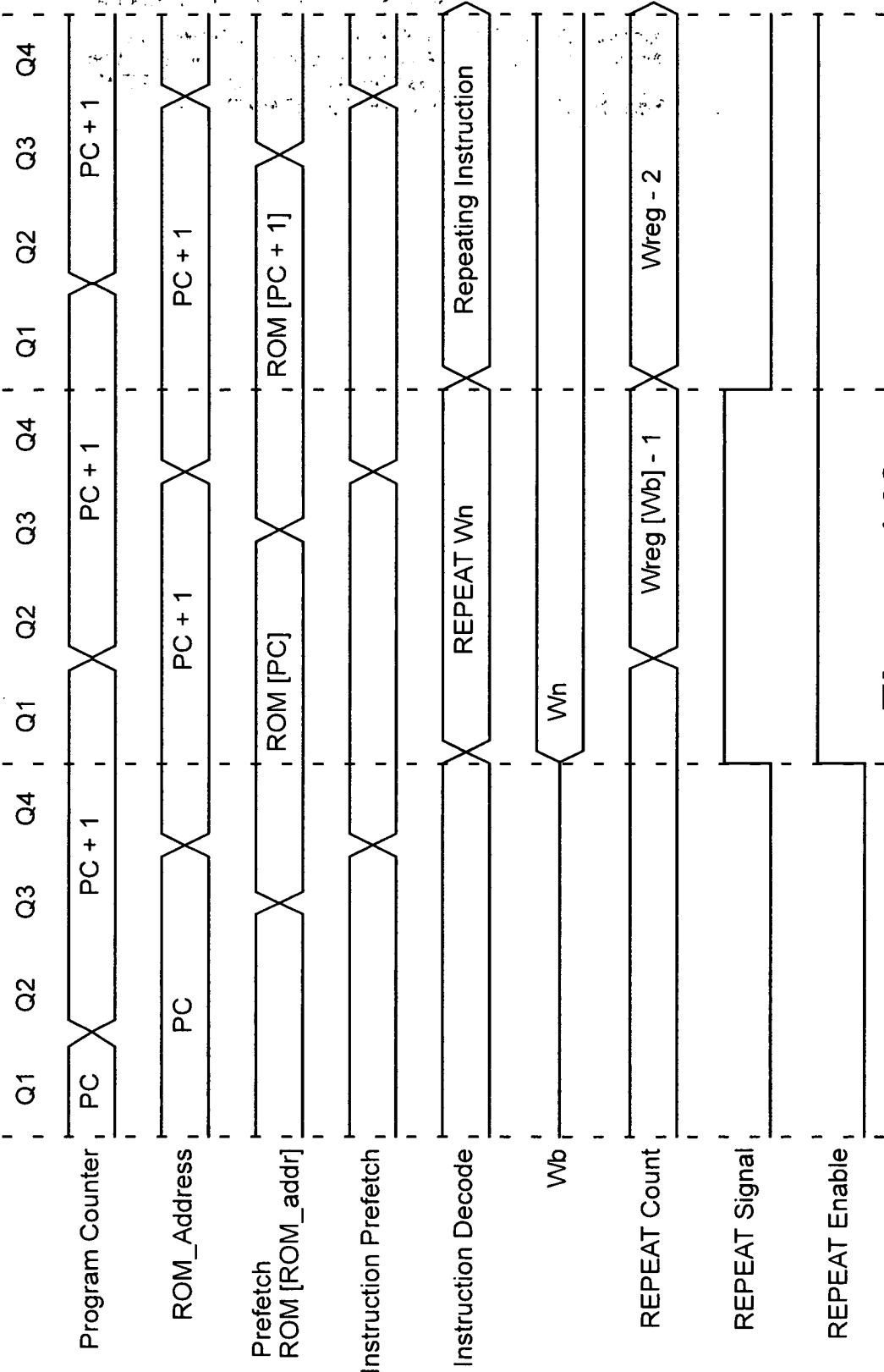


Figure 143

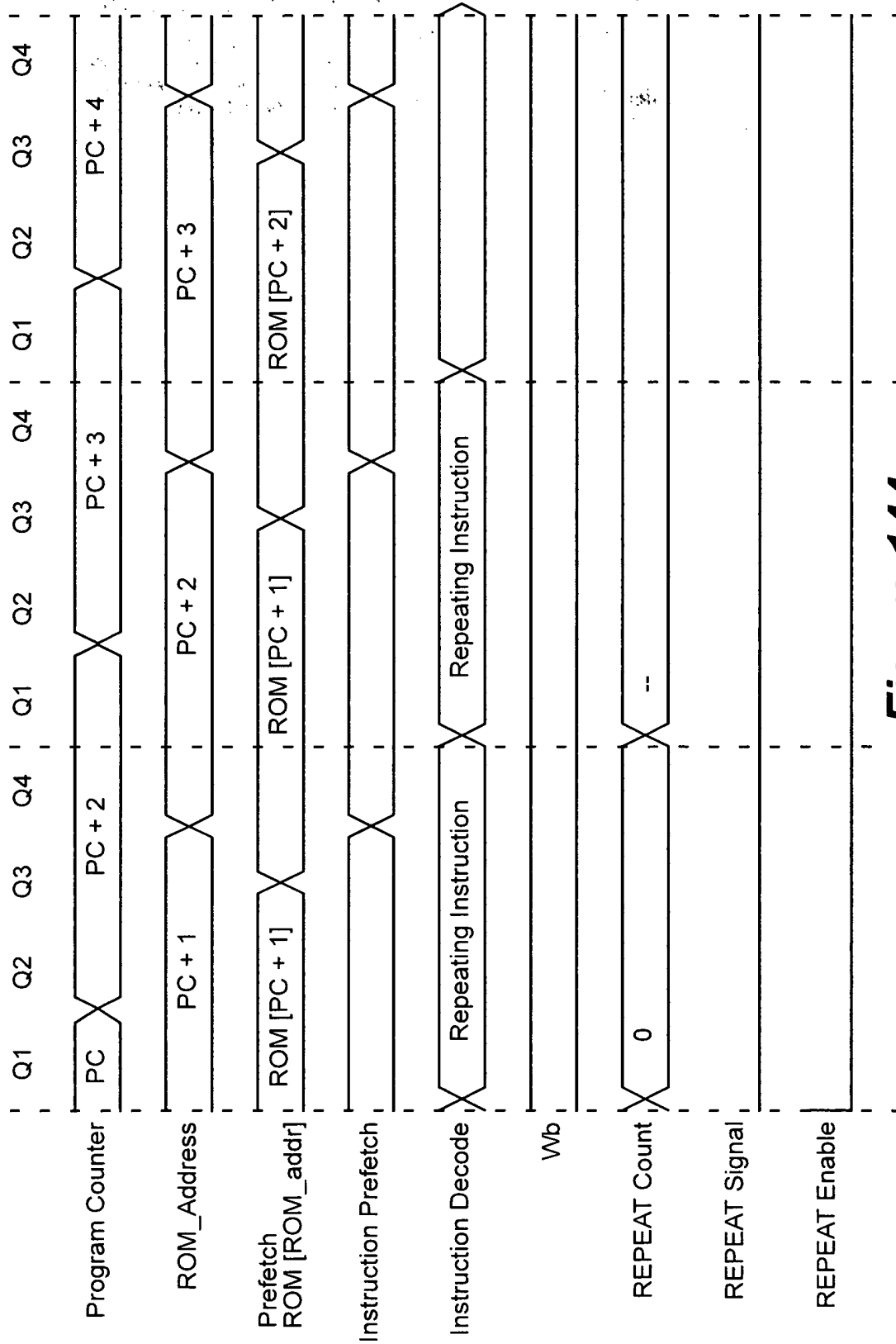


Figure 144

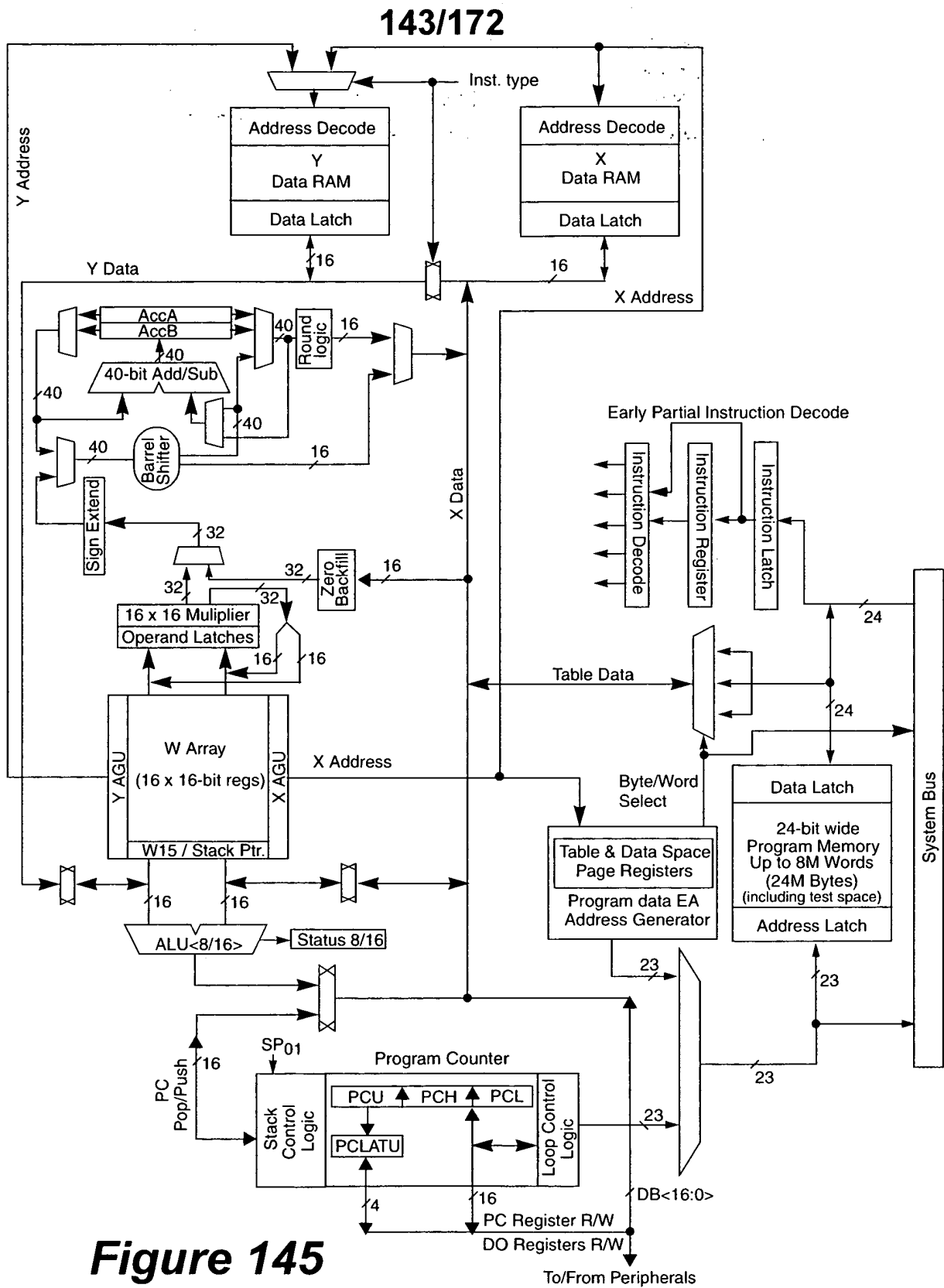


Figure 145

	15	MS byte	8	7	LS byte	0	
0001	Byte1			Byte 0			0000
0003	Byte3			Byte 2			0002
0005	Byte5			Byte 4			0004

Figure 146

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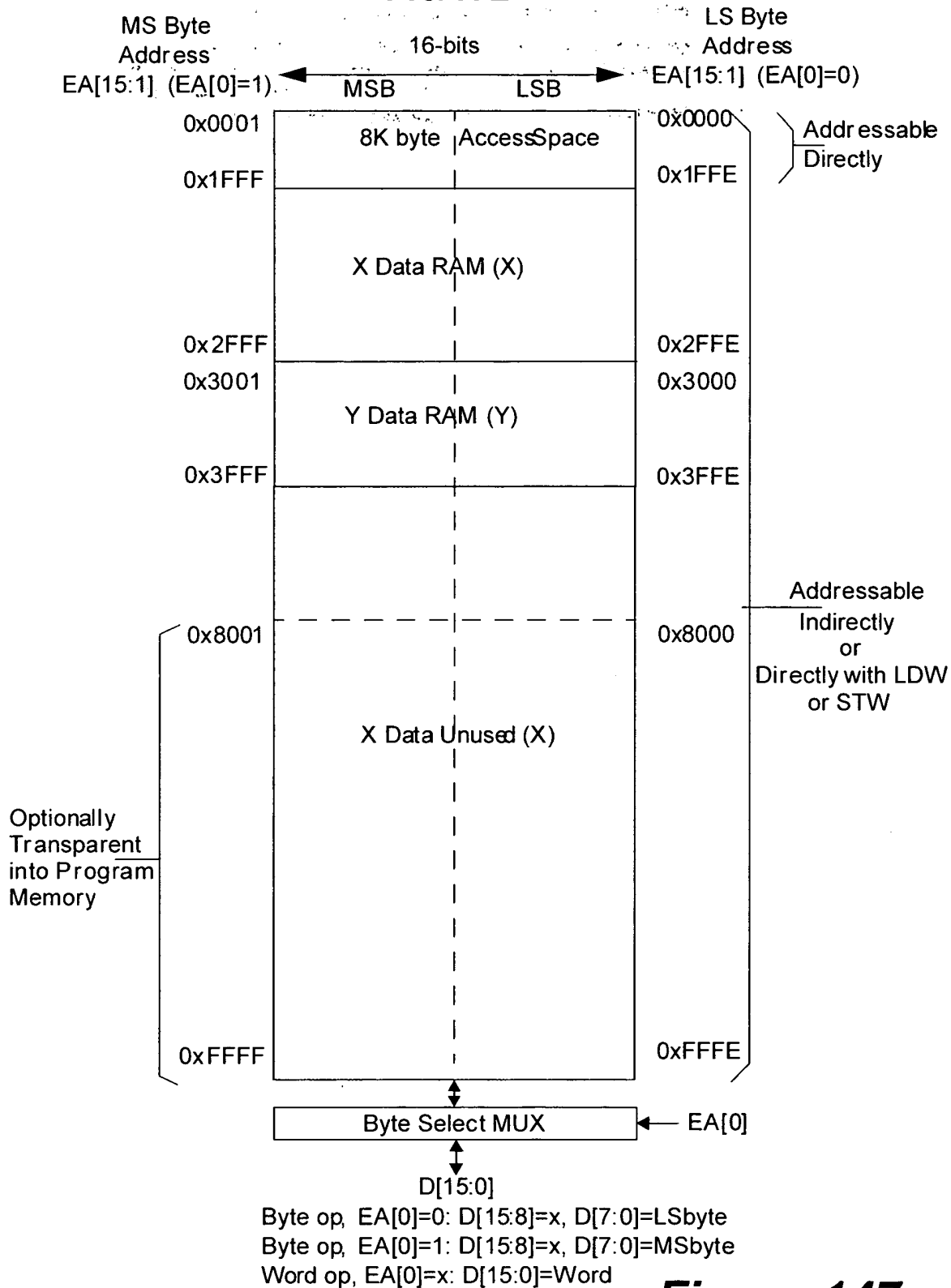


Figure 147

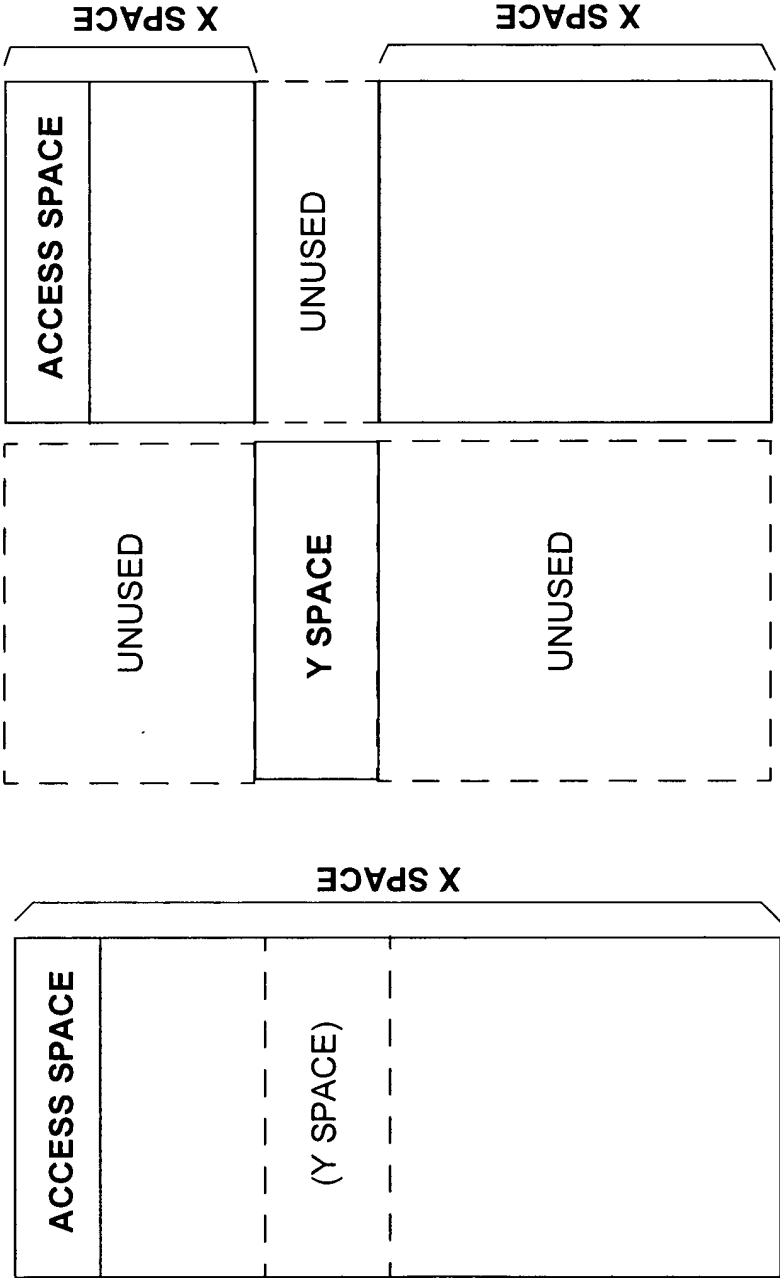


Figure 148

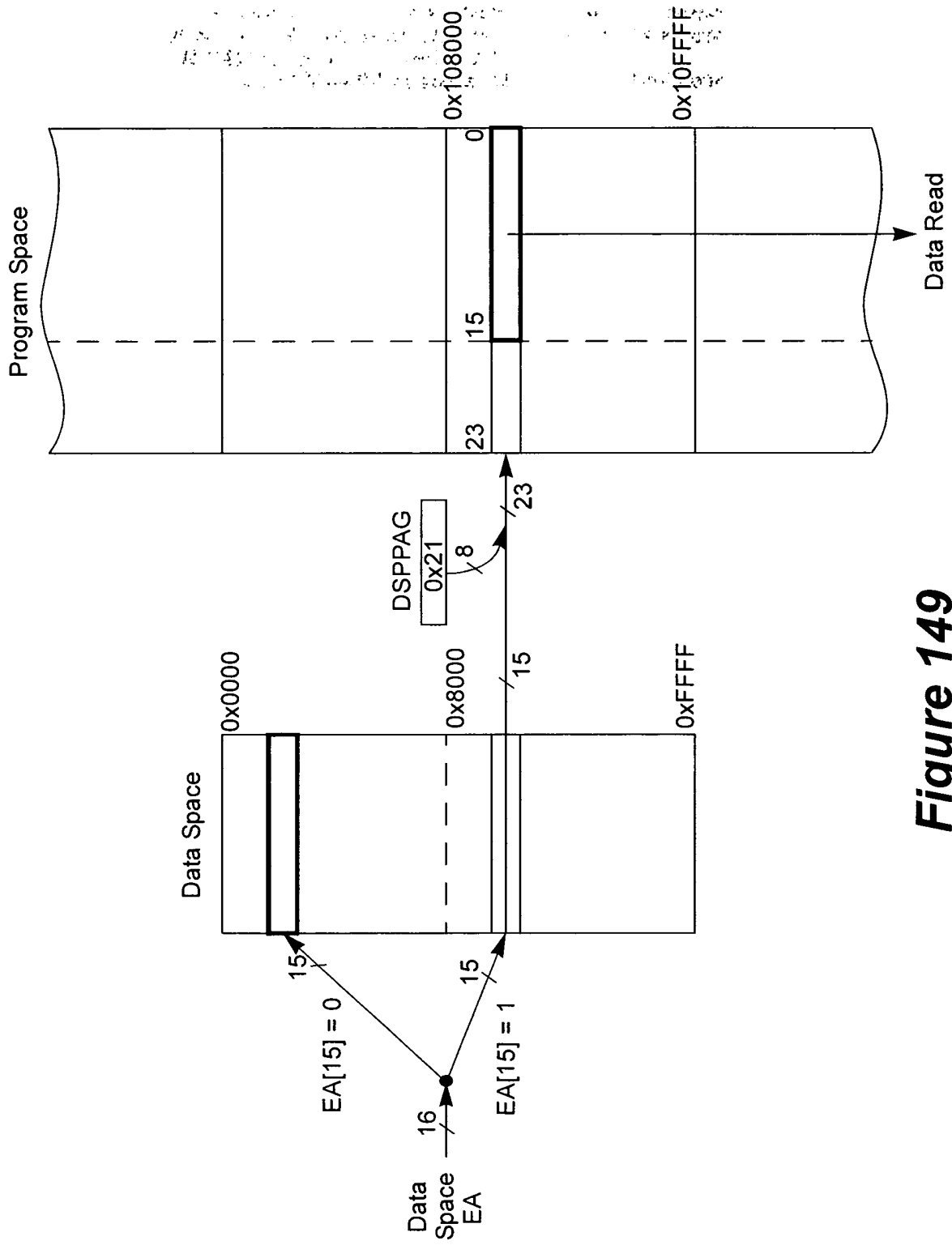


Figure 149

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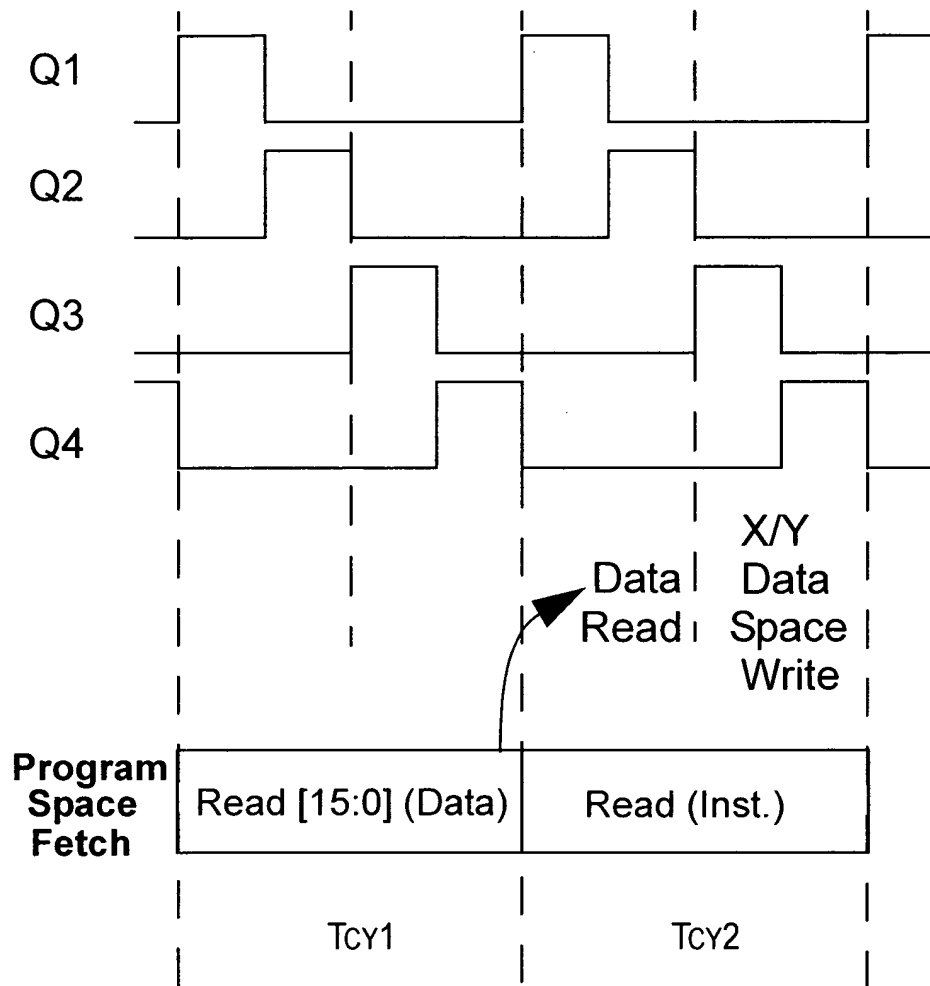
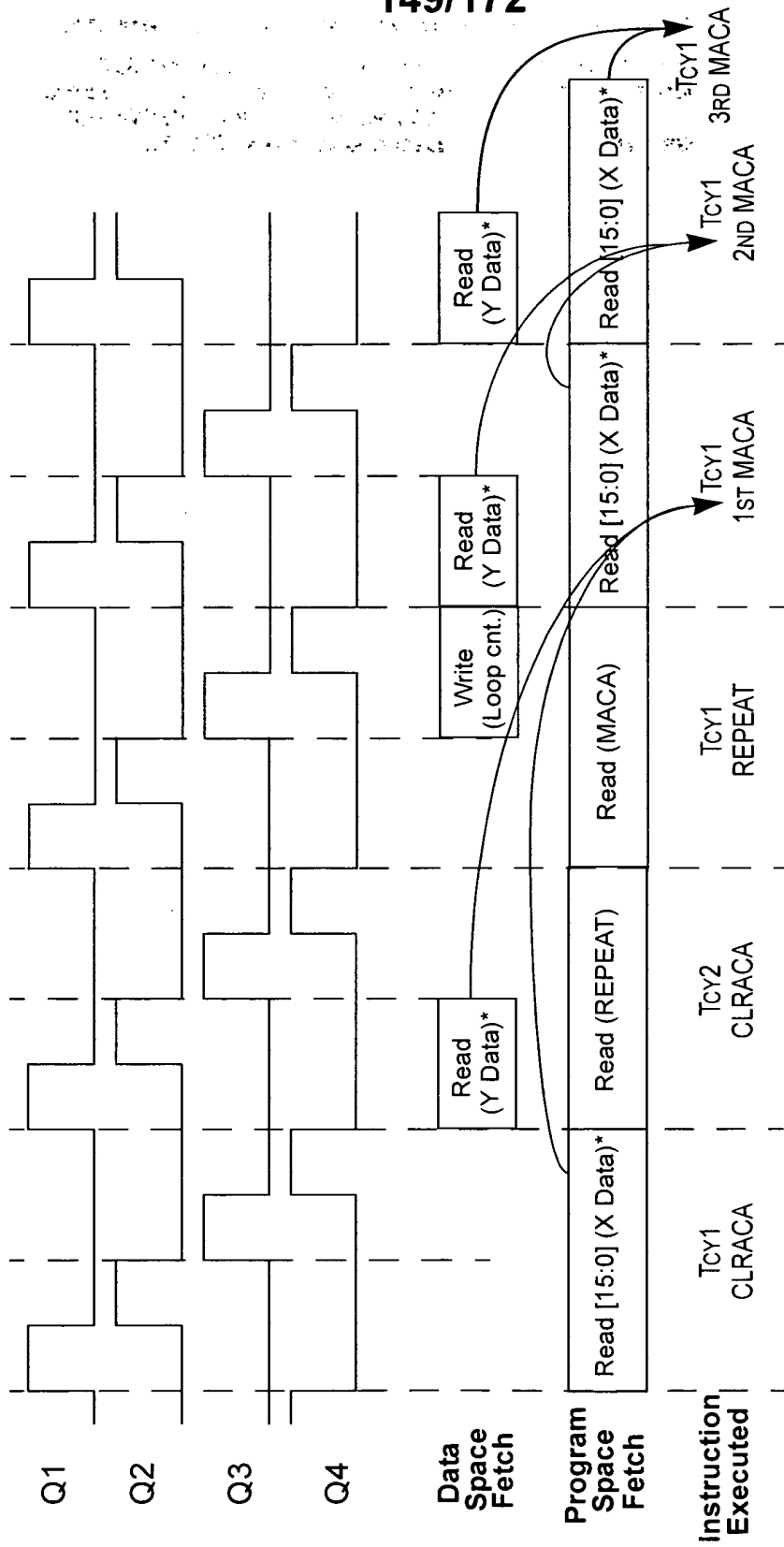


Figure 150



* Note: Program space window will typically reside in X space (depends upon data memory organization)

Figure 151

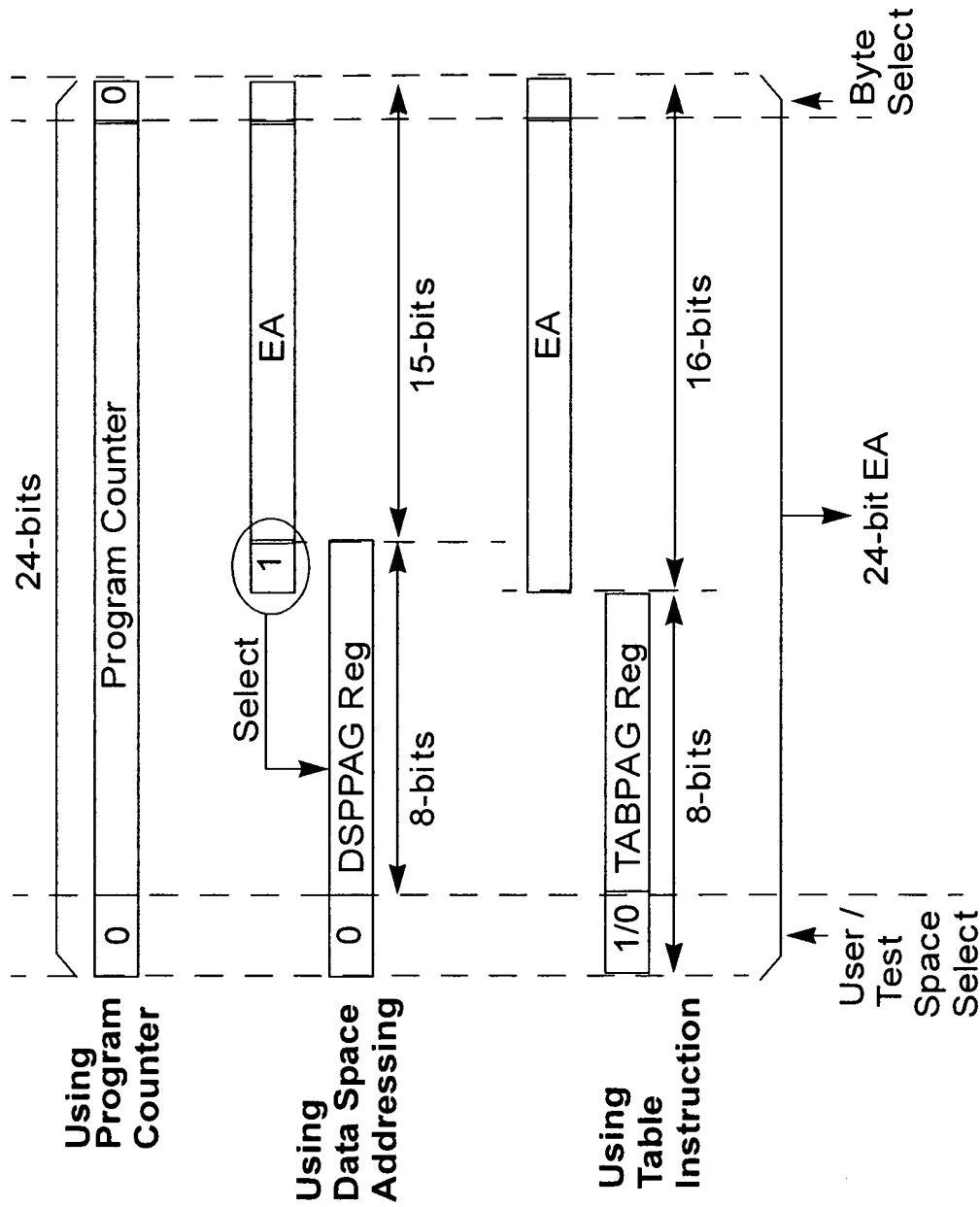


Figure 152

Note: Increment of PC<24:1> is equivalent to PC<24:0>+2

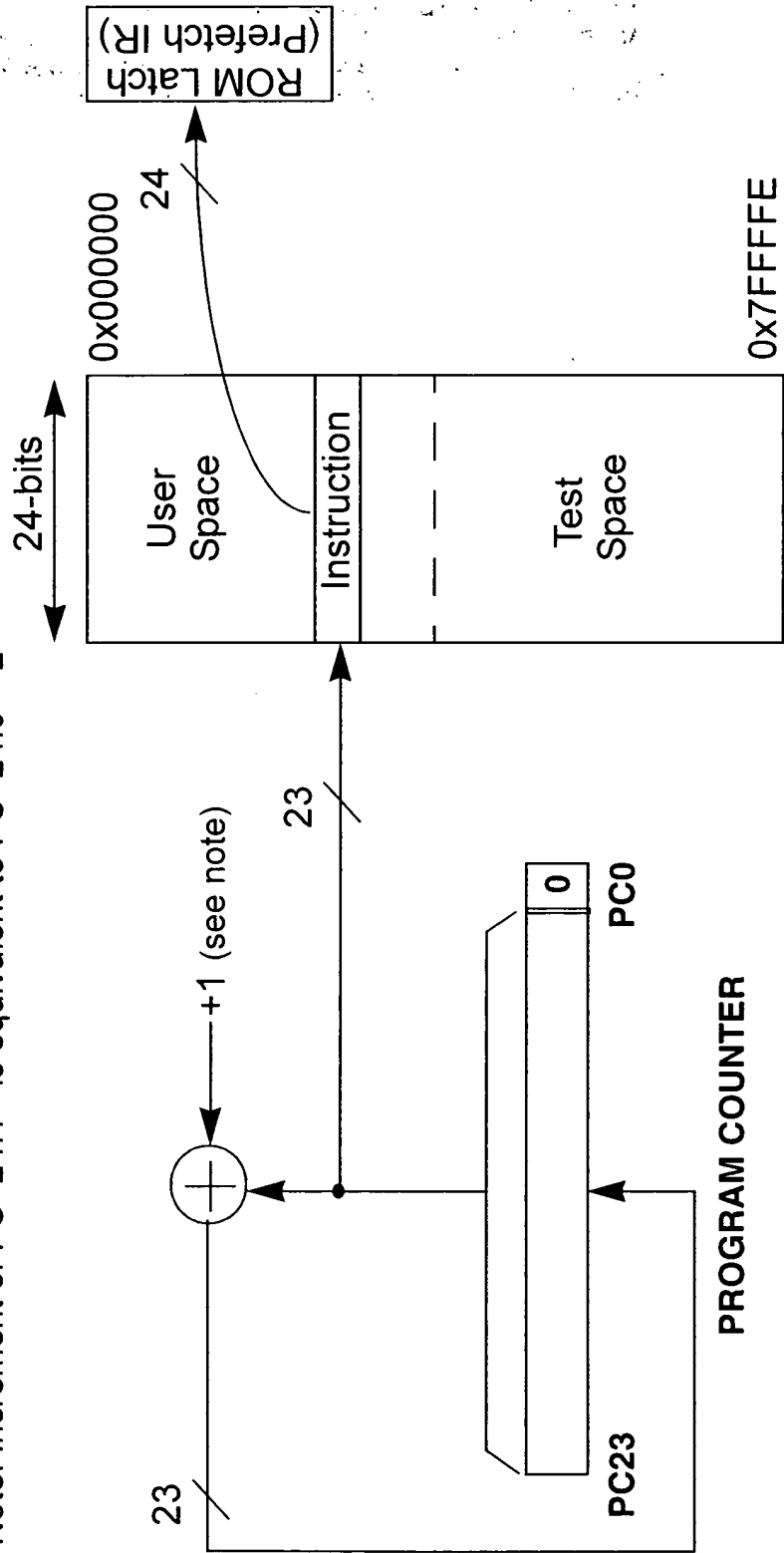


Figure 153

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User Program Space

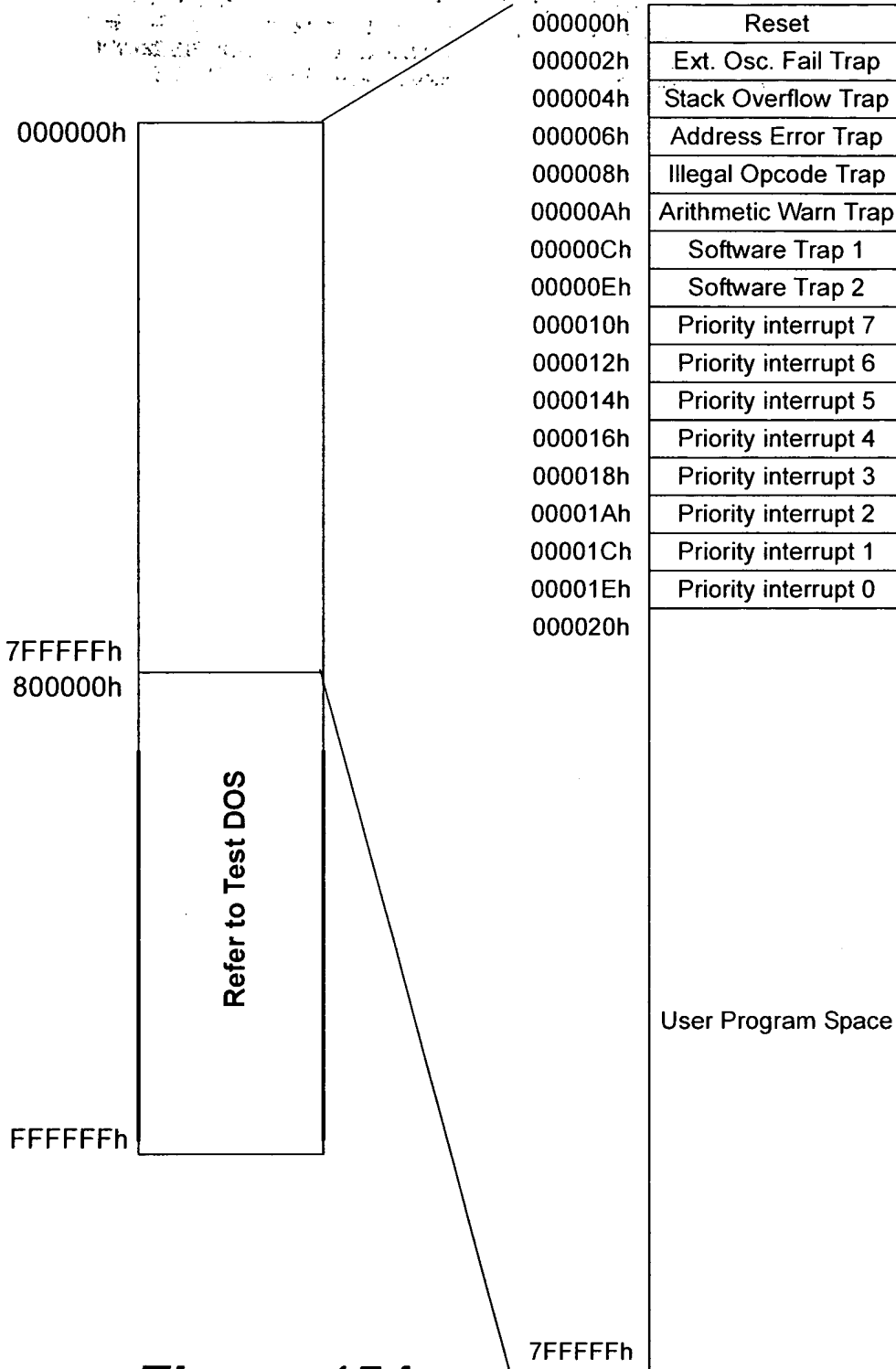


Figure 154

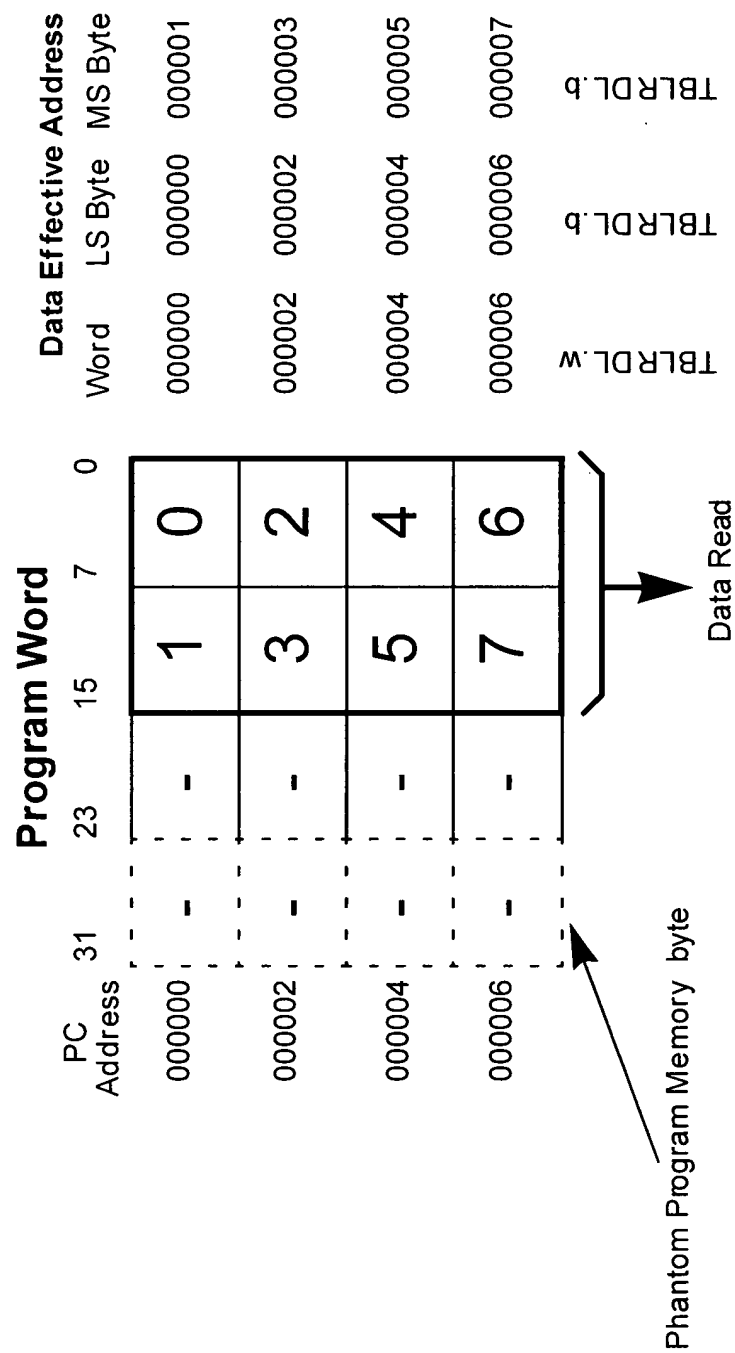


Figure 155

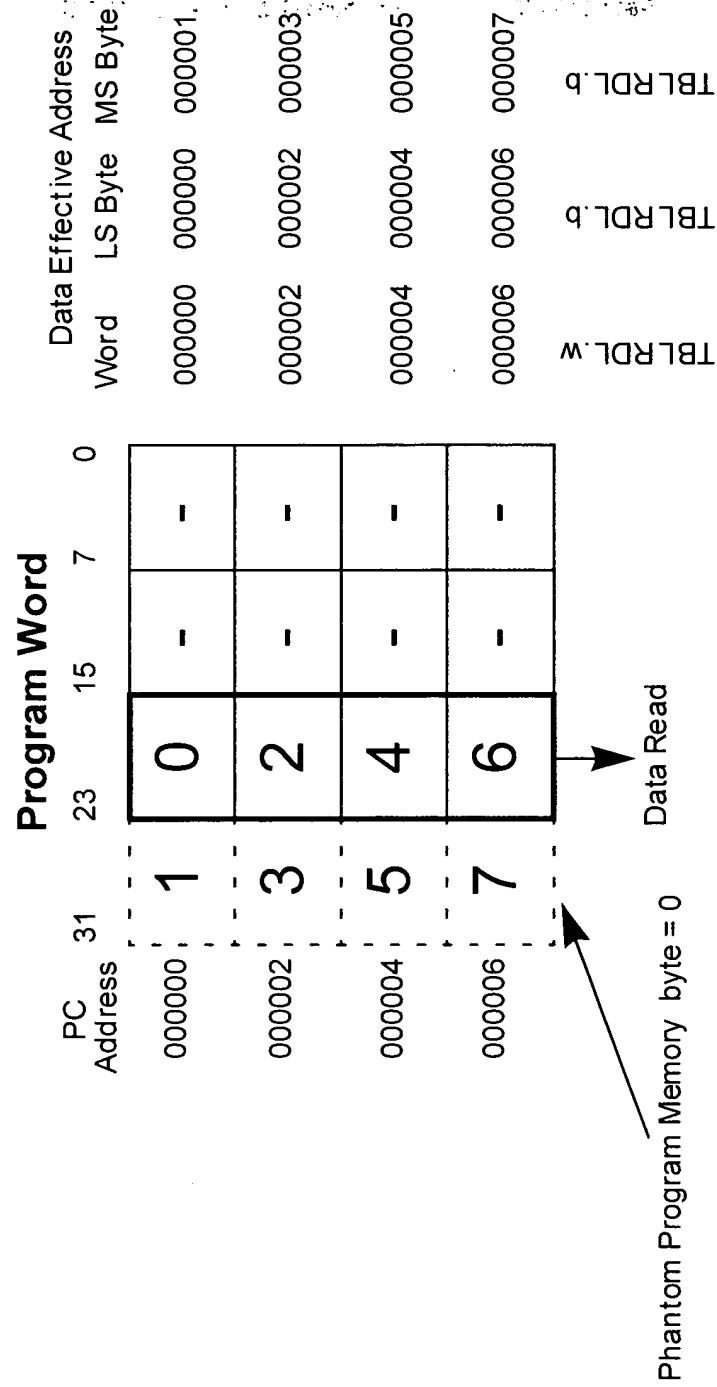
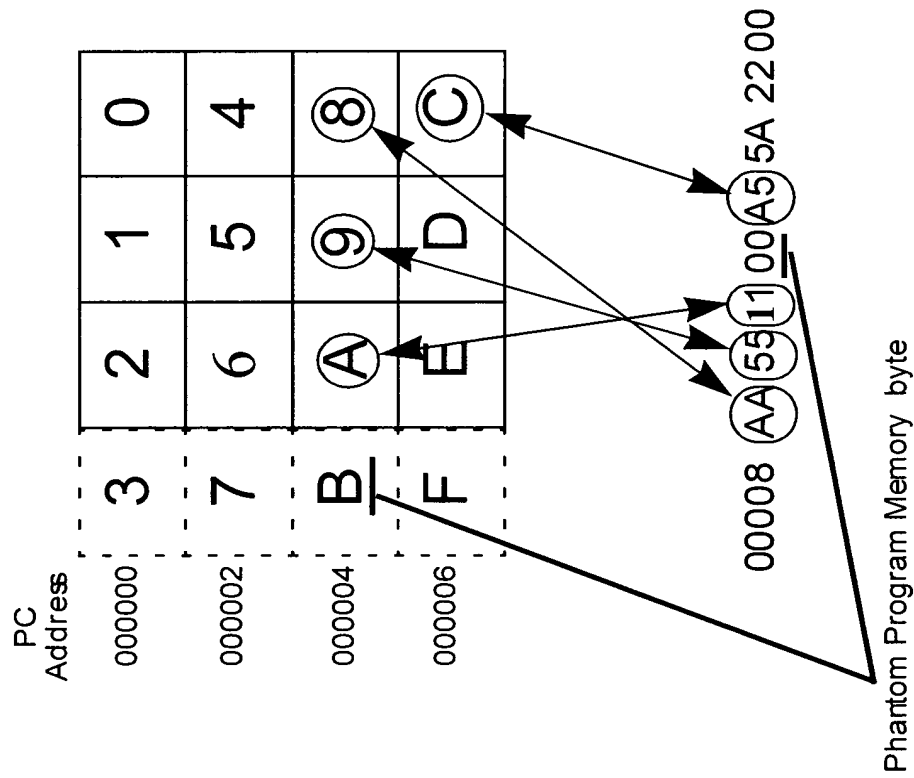


Figure 156



* Data EA = Byte Address >> 1,
LS-bit of EA ignored for PS address

Figure 157

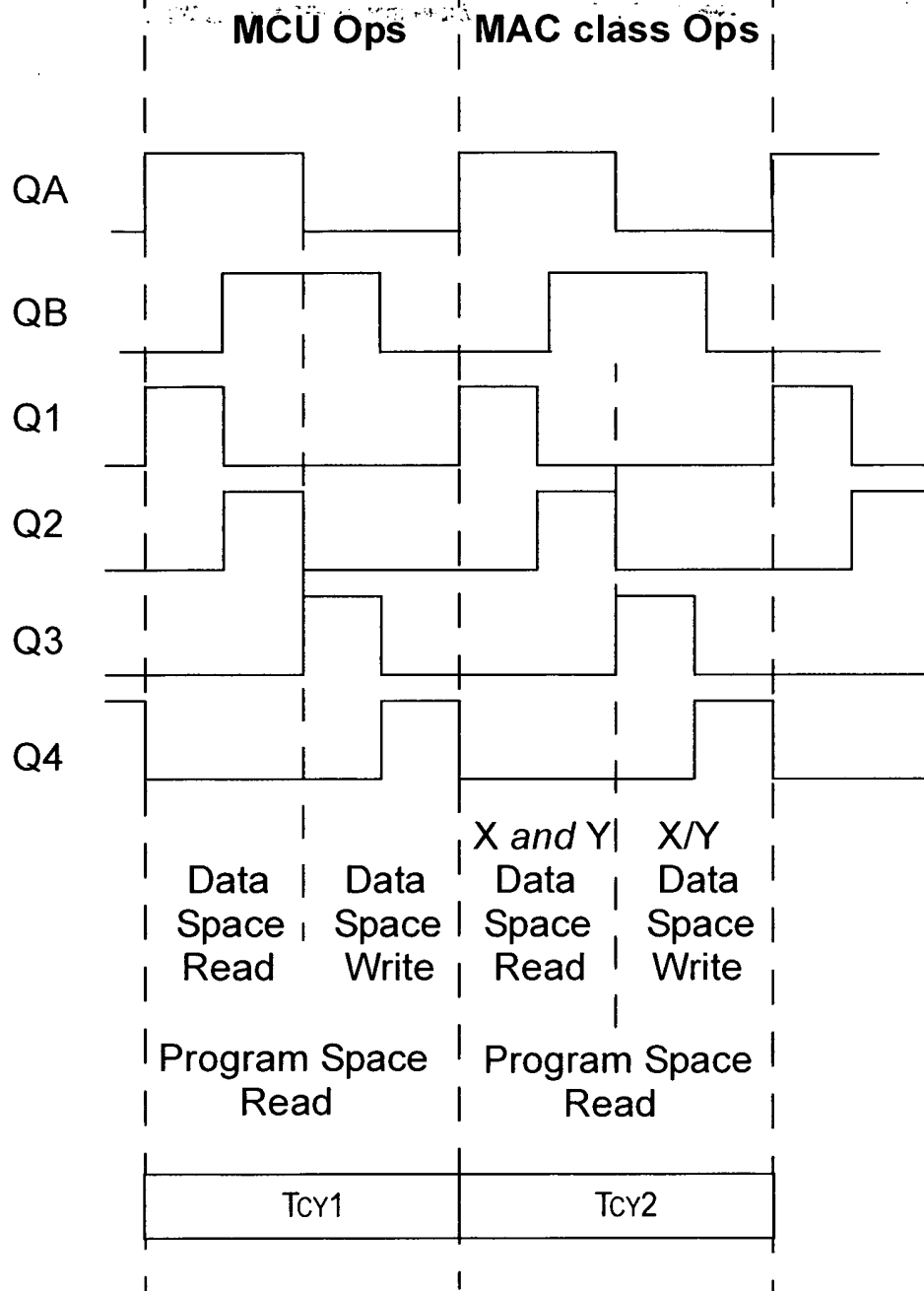


Figure 158

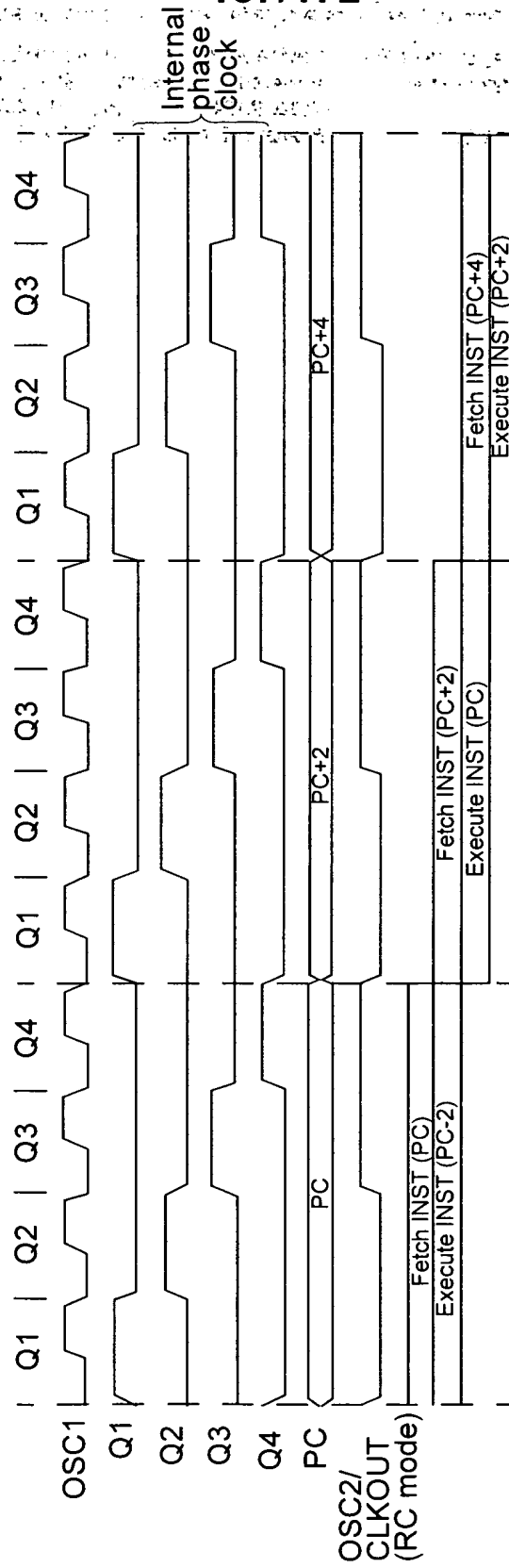


Figure 159

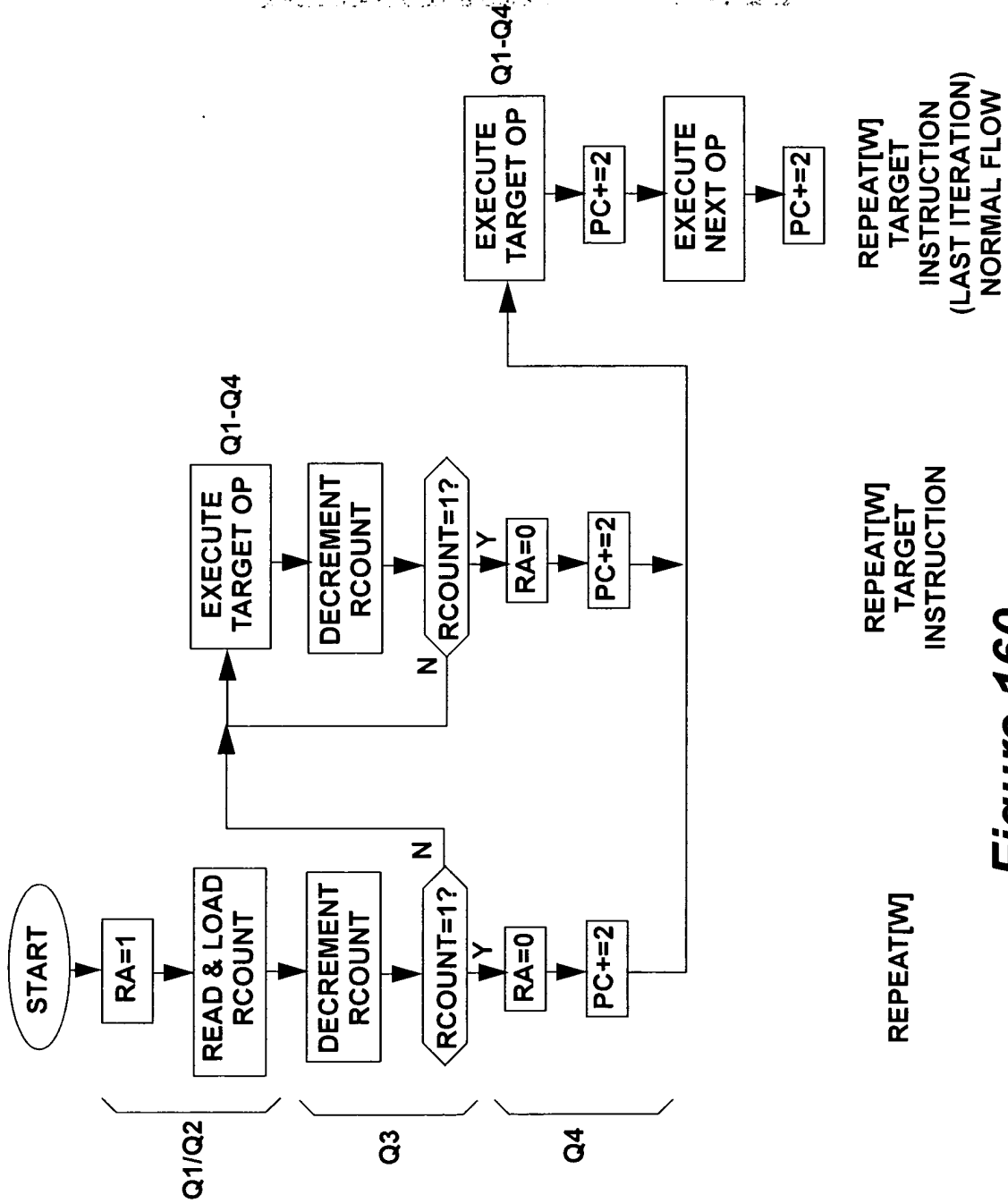


Figure 160

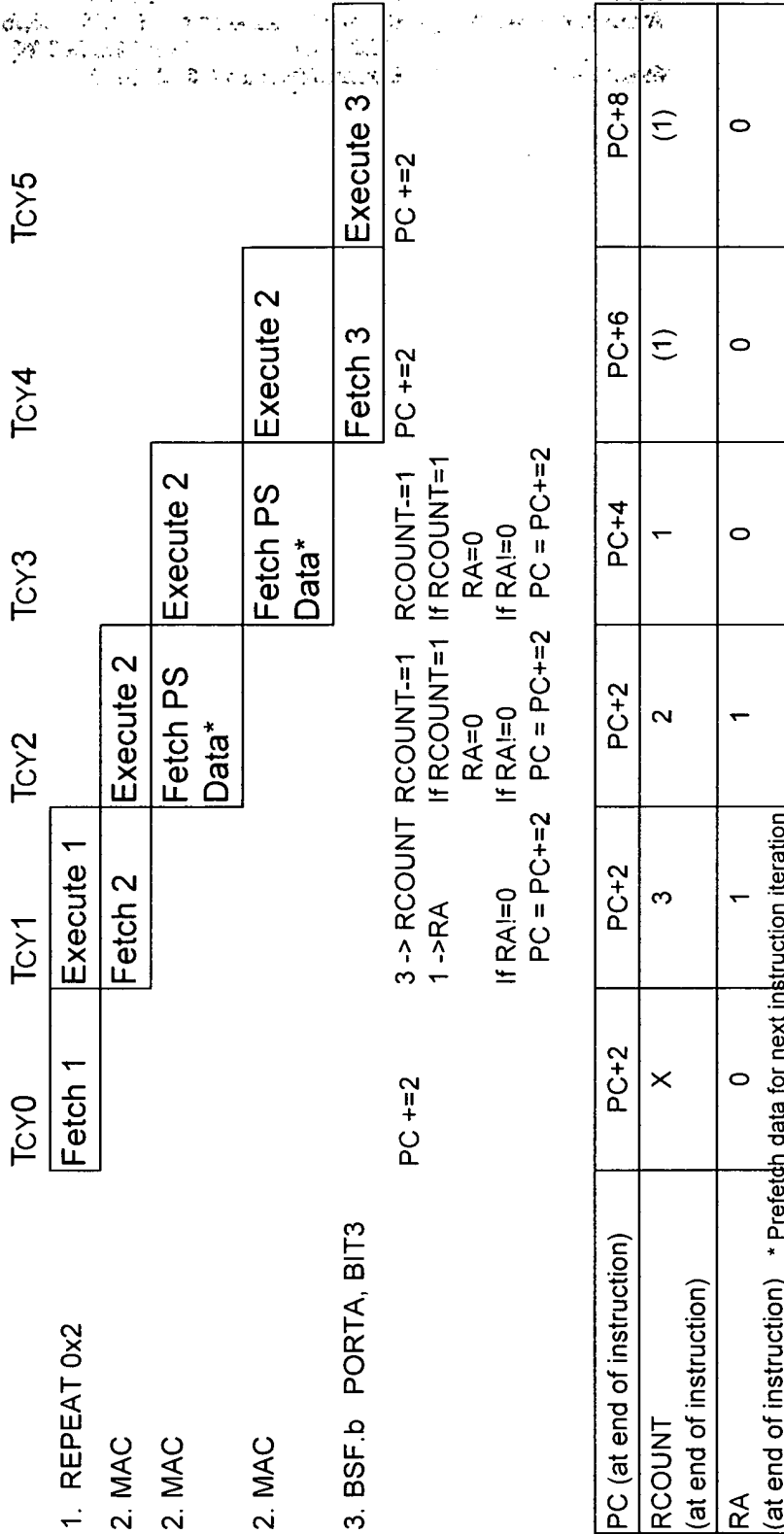


Figure 161

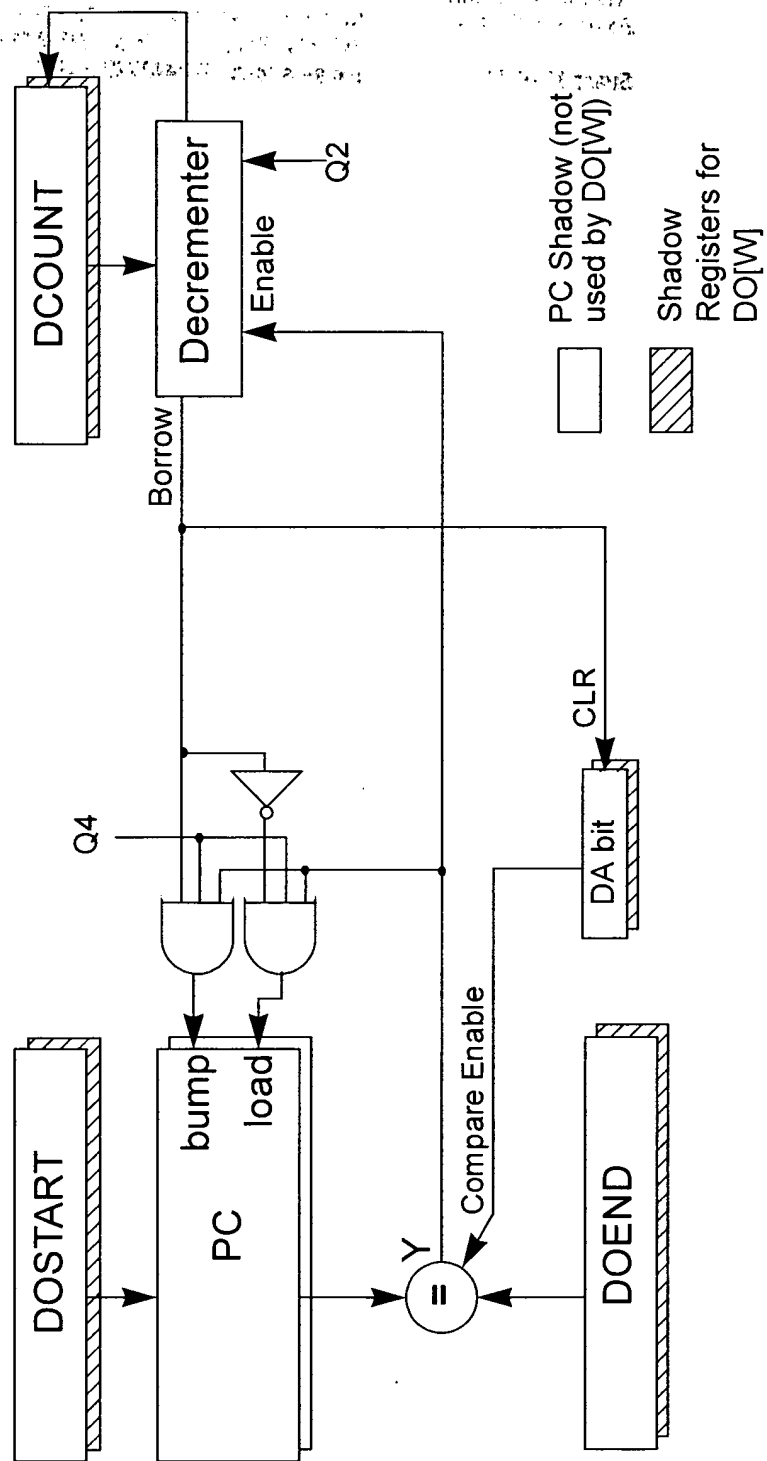


Figure 162

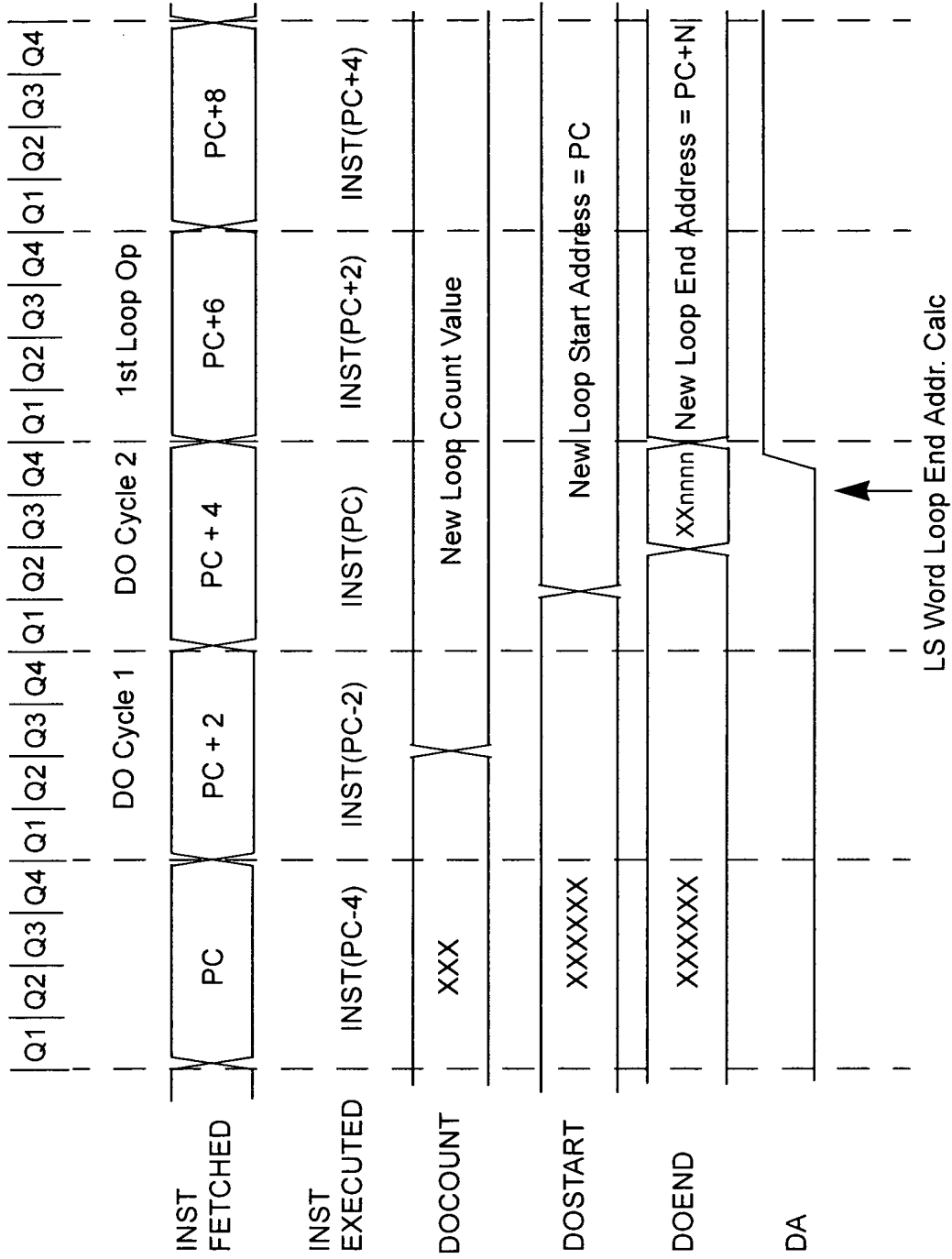


Figure 163

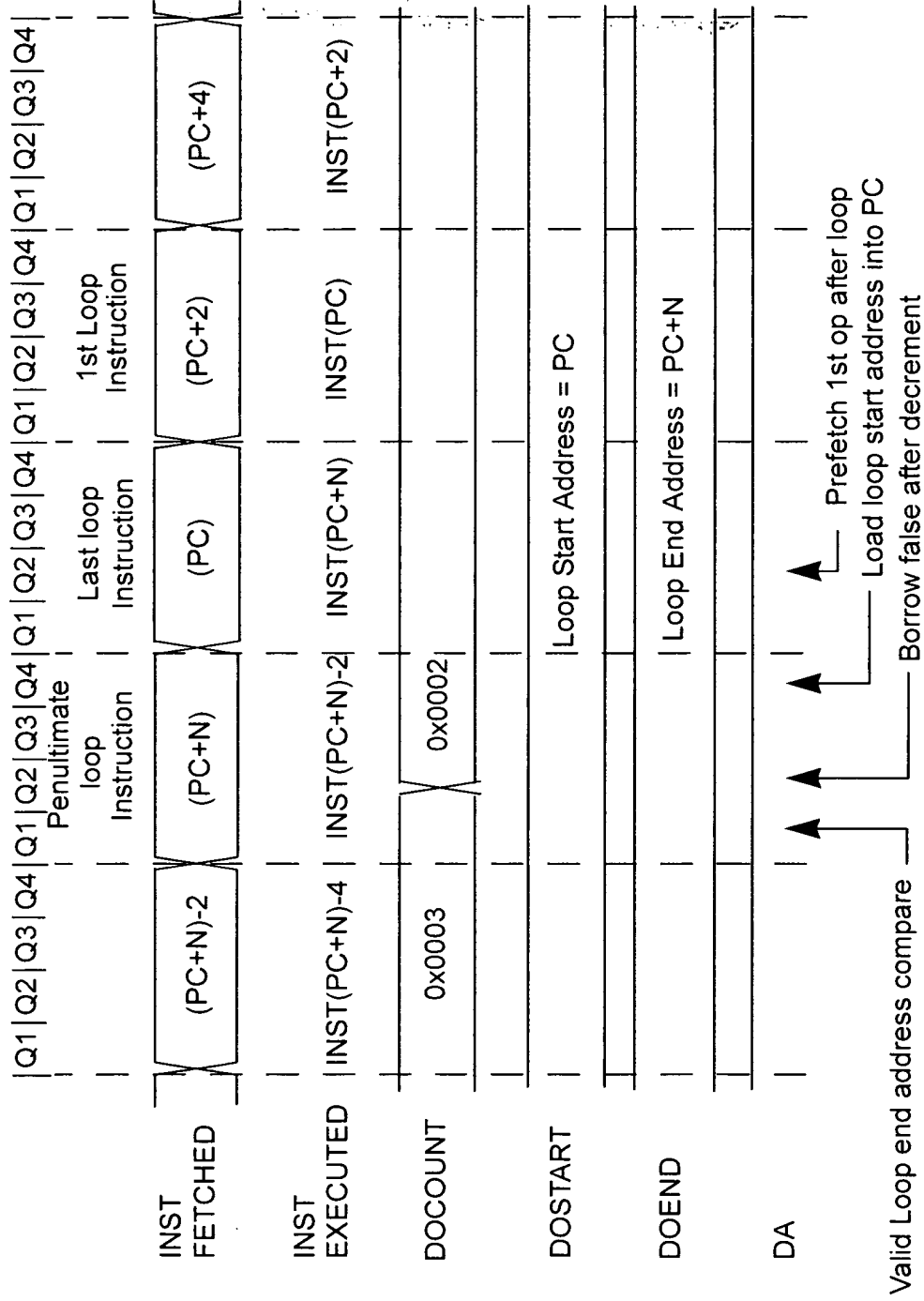


Figure 164

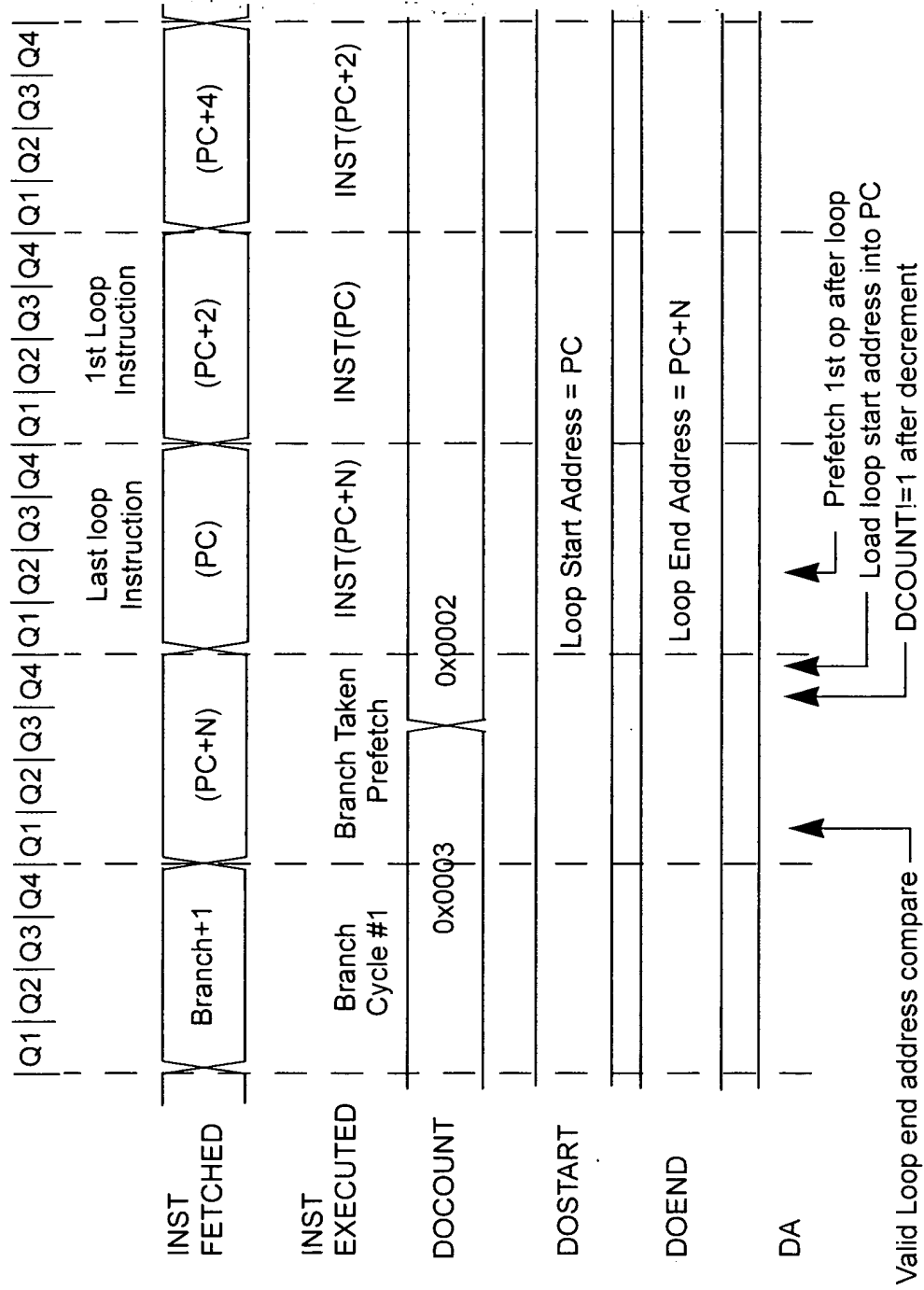


Figure 165

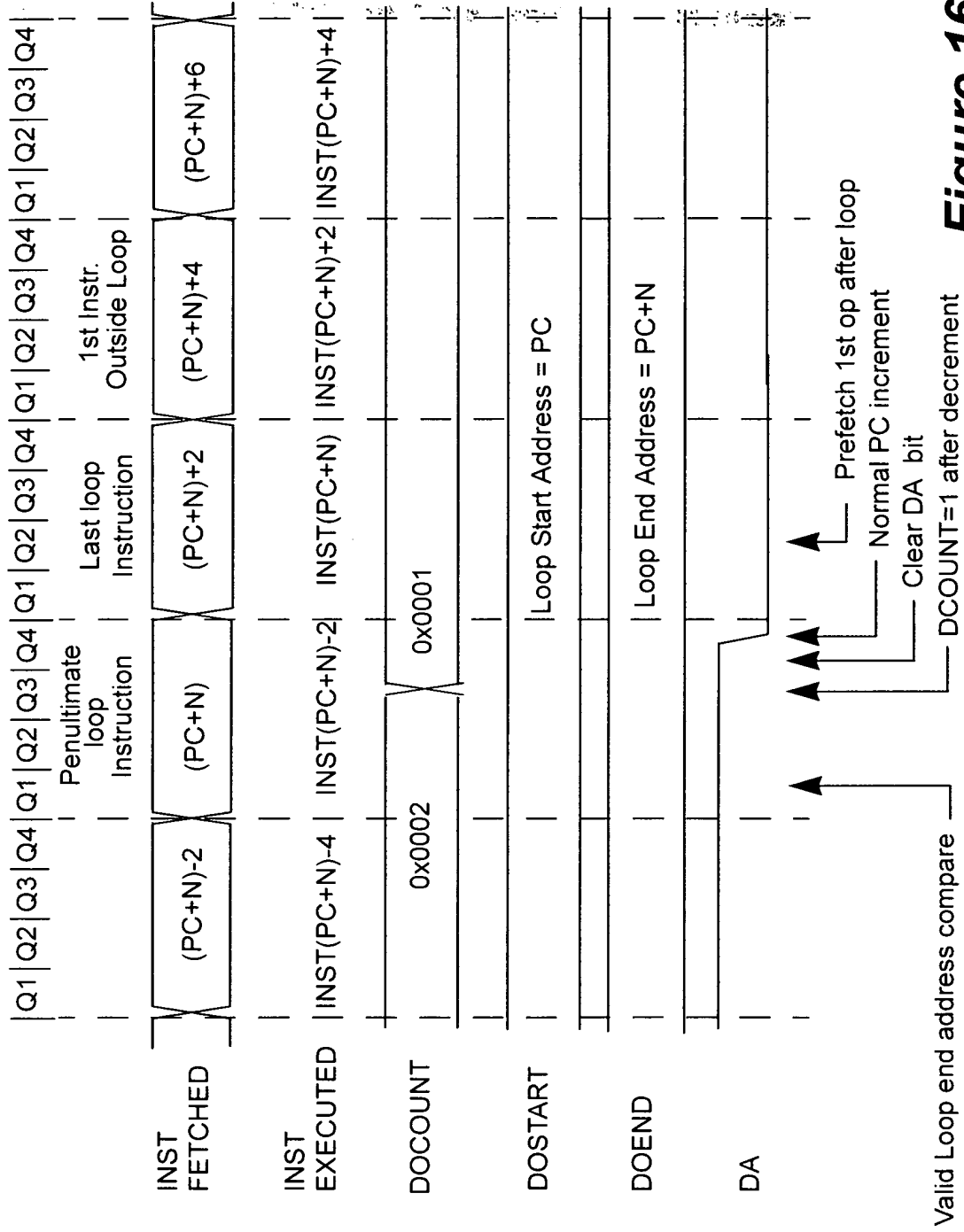
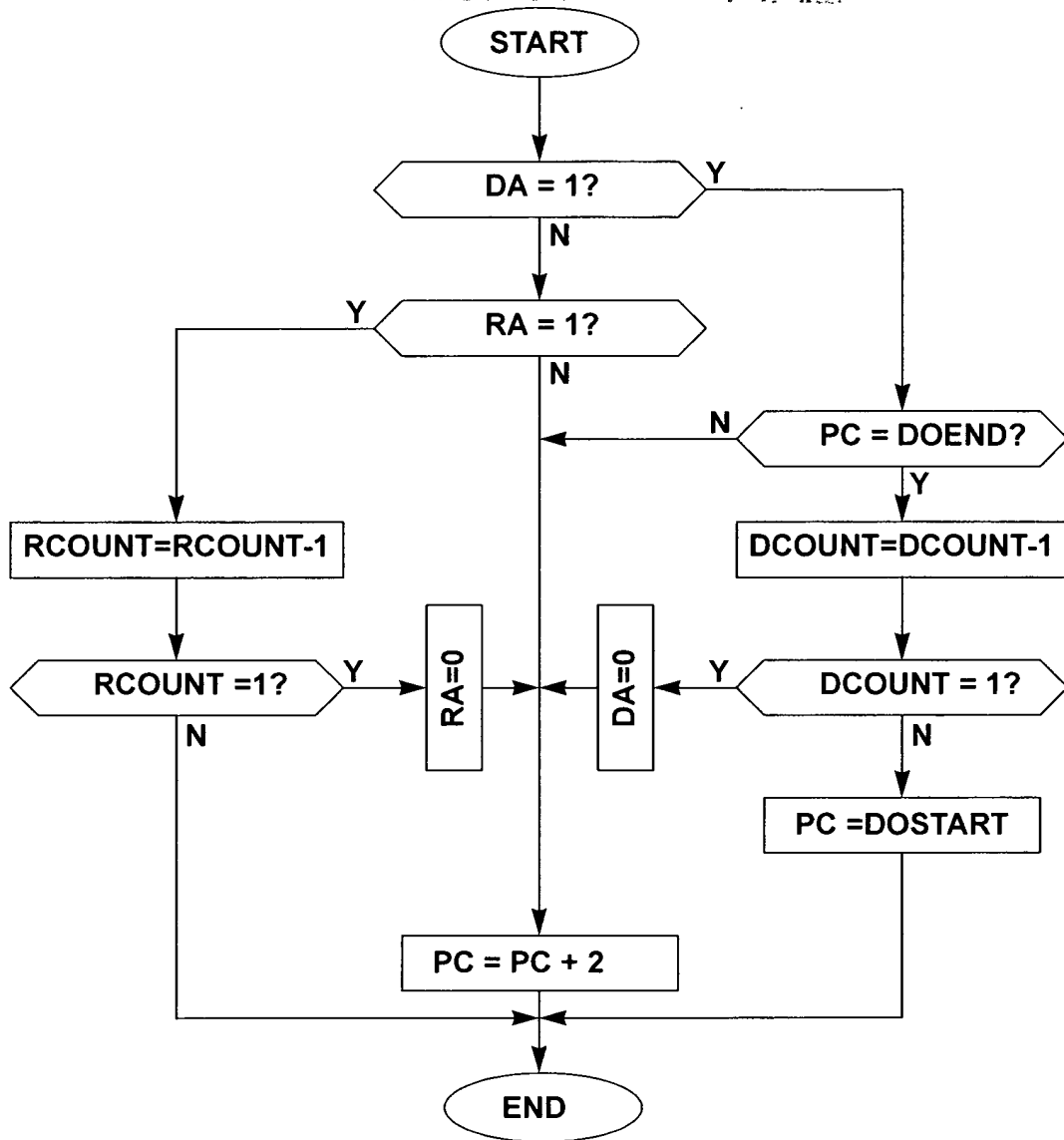


Figure 166

**Figure 167**

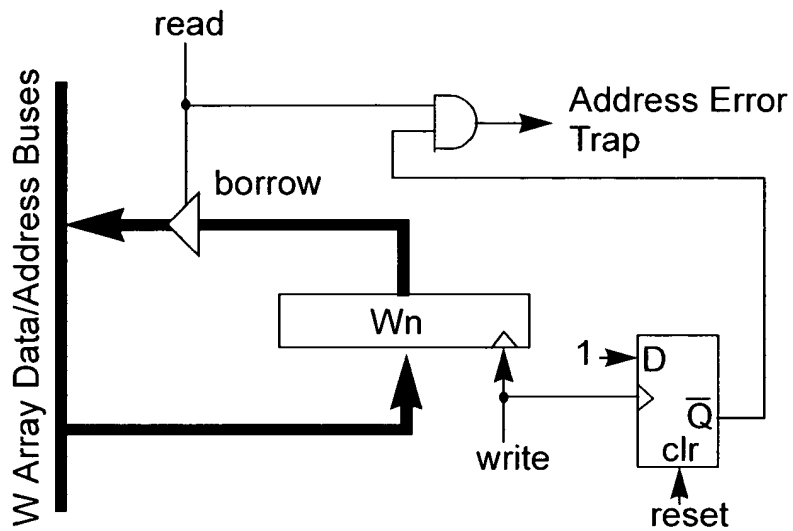


Figure 168

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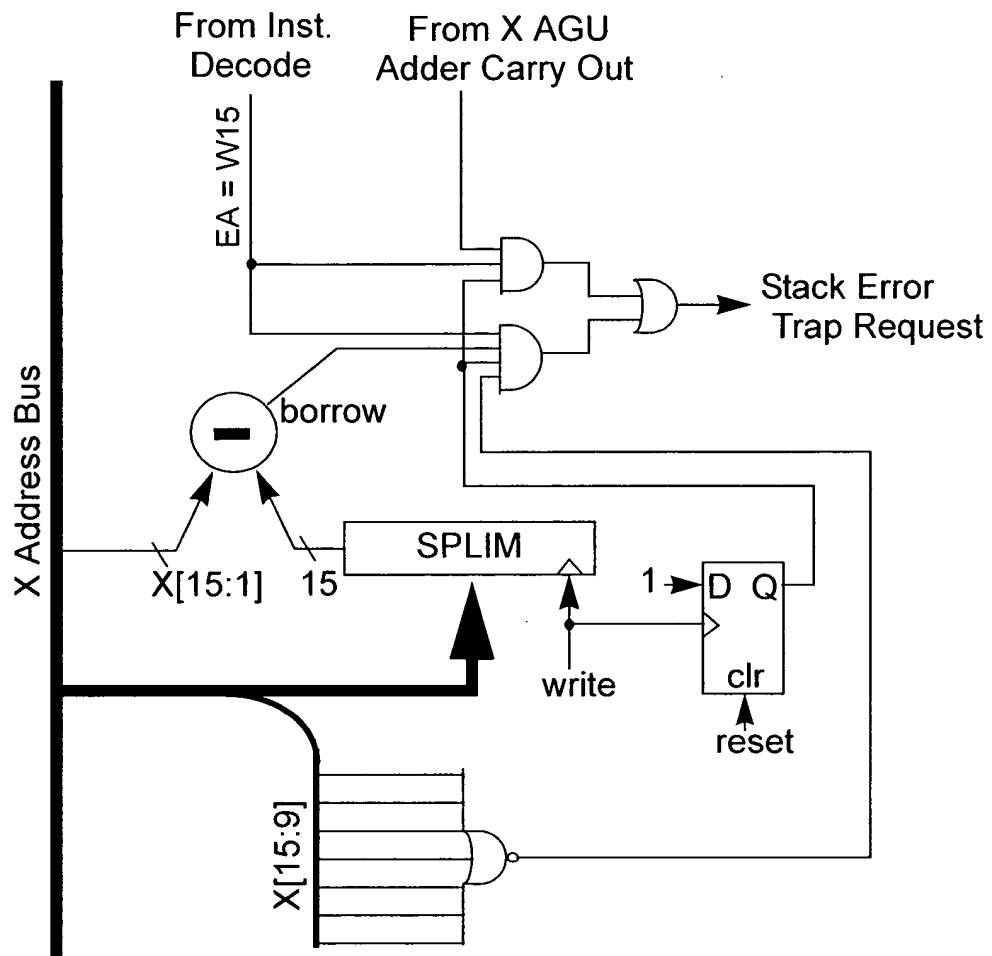


Figure 169

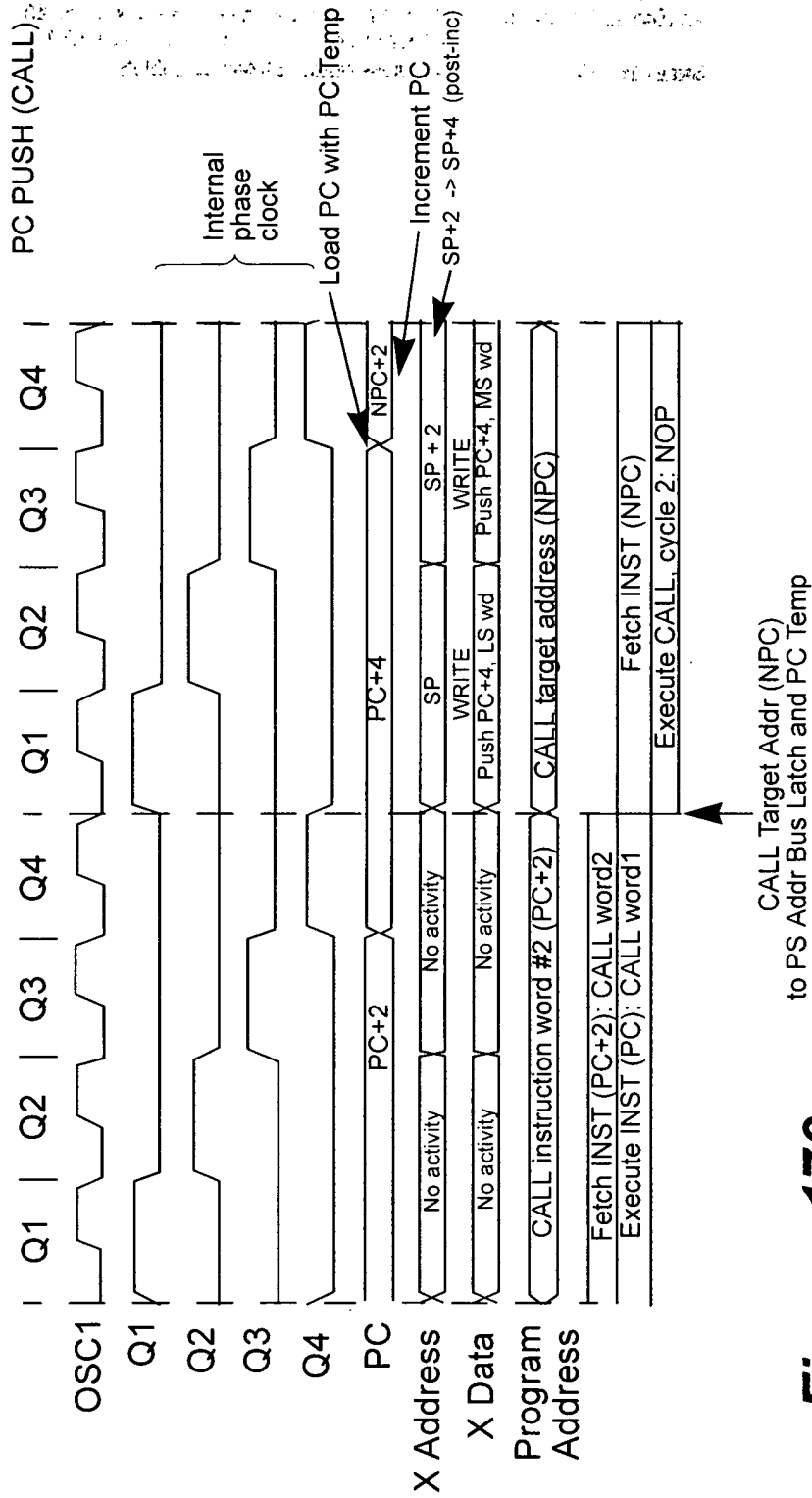


Figure 170

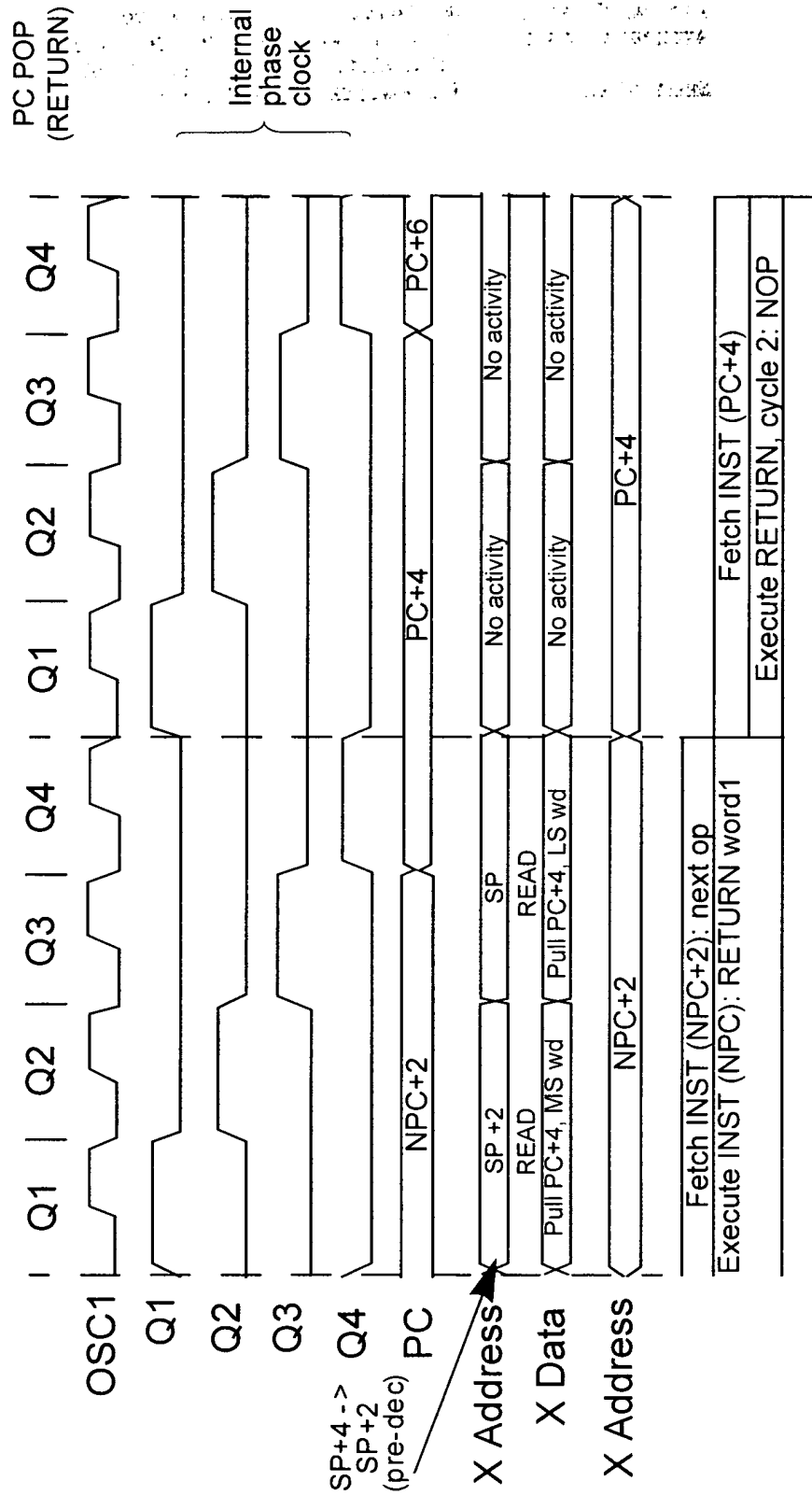


Figure 171

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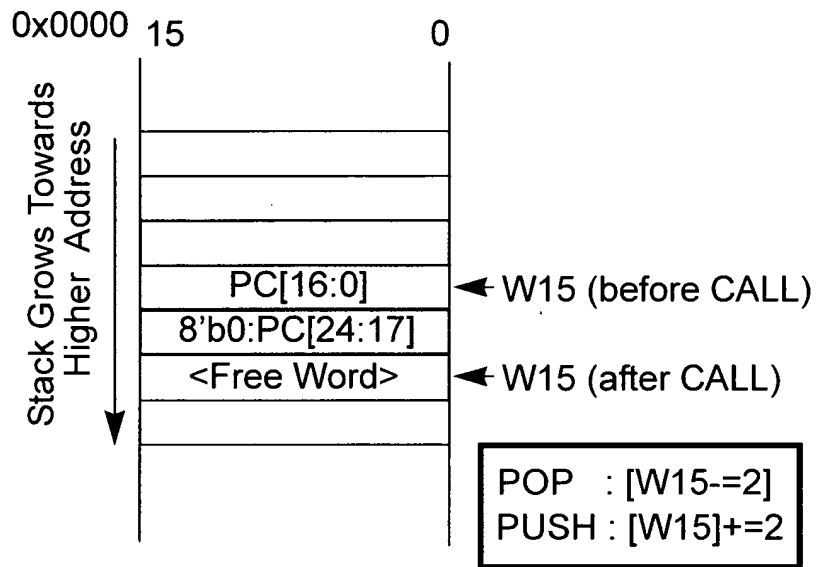


Figure 172

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W15->

0000h

E000h

FFFEh

W15 = E000h

W0 = 5A5Ah

W1 = 3636h

Figure 173a

W15->

5A5Ah

0000h

E000h

FFFEh

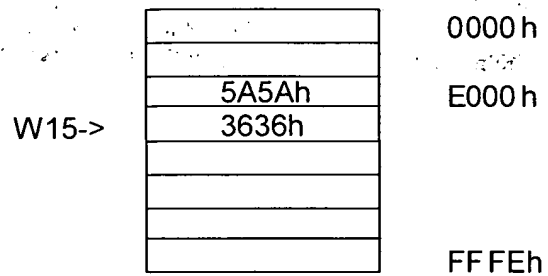
W15 = E002h

W0 = 5A5Ah

W1 = 3636h

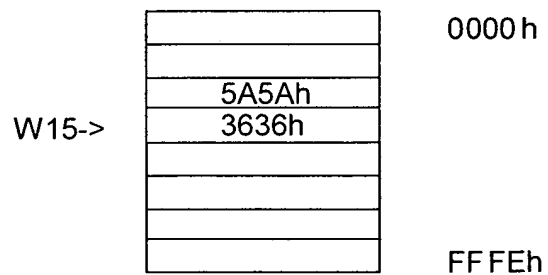
Figure 173b

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W15 = E004h
W0 = 5A5Ah
W1 = 3636h

Figure 173c



W15 = E002h
03636h → W3

Figure 173d